

**Lifestyle Related Diseases and General Health of City Dwellers:
A Study on Rourkela City**

**(Thesis submitted for the partial fulfilment of
Master's Degree in Development Studies)**

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DECLARATION

I hereby declare that I have completed my project on “**Lifestyle Related Diseases and General Health of City Dwellers: A Study on Rourkela City**” at National Institute of Technology, Rourkela, Odisha in the Academic year 2014 – 2015. Further, I declare that, this research work is an original one and never submitted to any University for the award of any Diploma or Degree.

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CERTIFICATE

This is to certify that the dissertation entitled, “**Lifestyle Related Diseases and General Health of City Dwellers:A Study on Rourkela**” submitted by MunmunOjha as partial fulfilment of the requirement for the degree of Master of Arts in Development Studies of the Department of Humanities and Social Sciences, National Institute of Technology, Rourkela, is an authentic work carried out by her under my supervision. To the best of my knowledge, the matter embodied in the dissertation has not been submitted to any other university/ institute for the award of any degree or diploma.

Dr. Ramakrishna Biswal

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CONTENTS

	Page
Declaration	i
Certificate	ii
Acknowledgment	iii
Contents	iv
List of Tables	v
List of Figures	vi
Abstract	ix
1 Chapter 1 Introduction	1-7
1.1 Causes of lifestyle diseases	3
1.2 Prevention of Lifestyle Diseases	5
2 Chapter 2 Review of Literature	8-11
2.1 Common lifestyle diseases	9
2.2 Rationale of the study	11
2.3 Objective of the study	11
3 Chapter 3 Method of Study	12-14
3.1 Study area	12
3.2 Sample	12
3.3 Methods of data collection	12
3.4 Data analysis	14
4 Chapter 4 Results and Findings	15-72
4.1 Daily schedule	17
4.2 Food habit	23
4.3 Exercise and Physical activity	38
4.4 Effective use of leisure time	42
4.5 Health condition	45
4.6 Wrong choices and habits	49
4.7 Work setting	54
4.8 Known Diseases	60
4.9 General Health	65
5 Chapter 5 Discussion and Conclusion	73
References	74

List of Tables

Table No.	Description	Page No
1	Demographic profile	16
2	Daily schedule	18
3	Food habit	24
4	Exercise and Physical Activity	38
5	Use of Leisure Time	42
6	Health Condition	45
7	BMI Code and result	49
8	Wrong choices and Habits	50
9	Workplace Environment	55
10	Lifestyle Diseases	61
11	General Health of City Dwellers	65

List of Figures

Figure	Description	Page
1	Wake up time	19
2	Exercise time	20
3	Breakfast time	20
4	Office time	21
5	Lunch time	21
6	Dinner time	22
7	Sleeping time	22
8	Breakfast	26
9	How often Breakfast	26
10	Lunch	26
11	Dinner	27
12	Cooked/Refrigerated	27
13	Microwave Food	27
14	Extra Salt	27
15	Fruits and Vegetables	28
16	Dietary Supplements	28
17	Diet Type	28
18	Filter Water	29
19	Eat Fast Food	29
20	How often fast food	29
21	Restaurant Visit	30
22	Why eat out	30
23	Preferred Types of Drinks	31
24	How often Soft Drinks	31
25	Decision on Food	32
26	Favorite Snacks	32
27	Eating when not hungry	33
28	Why eat when not hungry	33
29	Add teaspoons of sugar	34
30	Beverages you drink often	34
31	Why energy drinks	35
32	Cooking oil used at home	35
33	Physical Activity	39
34	Frequency of Physical Activity	39
35	How much active physically	40
36	Exercising for Health/Fitness	40
37	Exercising to lose weight	41
38	Games you play	41
39	Time spent in games & sports	41
40	Exercise/sports helps in good health	41
41	Leisure time use	43
42	Sharing household work	43
43	Spending time with family	43

44	Going for a vacation	43
45	Frequency of vacation	44
46	Outing on holidays & weekends	44
47	Visiting neighbors and relatives	44
48	Perceived body image	46
49	Want better shape	46
50	Doing something to improve health	46
51	Health improving methods adopted	47
52	Difficulties in getting better shape	47
53	Duration of sleep	47
54	Sleep problem	47
55	Use of sleeping pills	48
56	Results of sleepiness	48
57	Kind of person you are	51
58	Smoking habit	51
59	tried smoking during	51
60	Smoking per day	52
61	Why smoke	52
62	Consume alcohol	53
63	Use of Tobacco	53
64	Commuting to workplace	55
65	Work schedule	56
66	Working hour	56
67	Nature of job	57
68	Work area	57
69	Polluted work environment	58
70	Excess use of computer	58
71	Computer use per day	59
72	Presence of lifestyle diseases	61
73	Lifestyle disease diagnosed	62
74	Disease affecting daily performance	62
75	Under regular treatment	63
76	Frequency of visiting a doctor	63
77	Frequency of illness	63
78	Presence of mental illness	63
79	Able to concentrate	66
80	Lost sleep over worry	66
81	Playing a useful part	67
82	Capable of making decisions	67
83	Felt constantly under strain	68
84	Could not overcome difficulties	68
85	Able to enjoy life	69
86	Able to face problems	69
87	Feeling unhappy/depressed	70
88	Losing confidence	70
89	Thinking of self as worthless	71

ABSTRACT

Lifestyle refers to the quantity and quality of time spent in one's activities of daily life. Lifestyle diseases arise due to inappropriate relationship of people with the environment and wrong choices like sedentary habits, poor diet, and lack of physical exercise, alcohol abuse and smoking. The primary reason triggering lifestyle diseases among people are the lifestyle of the people. So, it is necessary to control this risk factor in order to improve health condition. The diseases are widespread across the globe and both the developing as well the developed countries are facing the burden of lifestyle diseases. Millions of people in the developing countries are adopting a westernized lifestyle, as a result of which the health status of the people is in tremendous risk. The objective of the study is to find out the prevalence of common lifestyle diseases among the city dwellers and to examine the risk factors responsible for the common lifestyle disease. A semi structured questionnaire comprising of people's daily schedule, food habit, physical activity, health threatening and promoting behavior etc. was developed by the researcher. Primary data collected from 100 respondents of Rourkela city in which 61% male respondents and 39% female respondents participated following an initial rapport. Upon willingness they were asked some questions related to lifestyle issues. The findings of the study showed an overall prevalence rate for the common lifestyle diseases like hypertension (30%), diabetes (18%), asthma (14%), and heart disease (4%). However, 34% of the participants reported for absence of any lifestyle diseases. It was found out that respondents were taking high fatty diet, high salt intake, smoking, consuming alcohol, lack of physical activity. One of the significant finding was on the perceived body image and actual BMI (Body Mass Index). Pearson correlation for these two variables was 0.20, suggesting a lack of self-evaluation among the participants with respect to their body. As an increased BMI is an important indicator for many of the lifestyle diseases, serious thought should be given to this growing burden of lifestyle diseases in the study population. In order to fight lifestyle diseases, improper eating habits should be changed followed by balanced diet and proper physical exercise.

Keywords: Life-style disease, sedentary habits

CHAPTER I

Introduction

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948). The term health is used to include physical health and also the mental, social, economic, political, and spiritual health of city dwellers (Breslow, L. 1972). Lifestyle in general means the way in which a person leads his/her life on a daily basis. Every person has his/her own lifestyle choices which may differ from other to another. People's distinct lifestyle covers their actions and surroundings. Some of the things that shape one's lifestyle include habits, career, financial means and emotional well-being. For example, habit, a person's frequent behavior, such as eating, exercising, and negative behavior patterns like smoking etc all play an important role in determining one's lifestyle. It makes them different from other diseases which are caused by things such as heredity (inherited from family background) or chance (like catching a cold from a friend). Modern life increases the lifestyle diseases and the number of people affected from it.

In terms of health, lifestyle means food habits, physical activity habits, and the use of substances such as alcohol and tobacco and contact to other risky behaviors. Lifestyle diseases characterize those diseases that involve risk factors like poor dietary choices, smoking, and lack of physical activity, inactive behavior and life-stress and an inappropriate relationship of people with the environment (Sharma, M., & Majumdar, P. K. 2009). It includes Alzheimer's disease, Arthritis, and asthma, some kind of cancer, diabetes, obesity, stroke, depression, chronic liver disease, and chronic obstructive diseases. High Morbidity and mortality are the results due to cardiovascular and cerebrovascular disease, diabetes, cancers, bronchitis, emphysema etc.

The type of job, whether sitting or moving has an important bearing on one's lifestyle. Though monetary means is not an essential aspect, but it also characterizes the way in which an individual may live. Lifestyle is also a state of mind. Peace, joy, satisfaction is an important part of everyday living and an important factor in determining healthy lifestyle (Mega health Lifestyle, 2007)

Lifestyles are basically related to freedom that people have in decision making. Freedom in terms of making choices to lead one's life, freedom in terms of eating food, socialization, work

environment, etc (Veal, A. J. 1993). This characteristic of lifestyle diseases makes it different from another kind of diseases, for instance, a genetic disease which is caused by inheritance of certain lethal genes from parents. In the present contemporary world which has already tilted towards globalization has increased the probability of getting affected with lifestyle diseases because of more freedom available to people, harmful environment etc.

Lifestyle diseases allude to diseases that occur due to decisions and choices that an individual makes in his/her life. Lifestyle diseases are present mainly in the developed countries because people in developed countries are slanted towards eating more of unhealthy food, having an active way of life, undesirable habits such as smoking, drinking liquor. Lifestyle diseases become more and more common as the nation becomes more industrialized because they are brought on by a wrong relationship of individuals with their surroundings (Zimmet, P.2000).

Lifestyle diseases are different from other types of diseases because in comparison to other types of diseases it can be potentially prevented and can be lowered to a greater extent relatively by making changes in the diet and lifestyle. Lifestyle diseases occur in a seemingly harmless way but have a grave effect. It takes a year to develop which ones established cannot be cured easily (Natural Health Perspective, 2011).

Over a period of time, lifestyle diseases are affecting the health status of the people. The well-being status of the people as a result of the lifestyle diseases are affected in general. The diseases are widespread across the globe and both the developing as well the developed countries are facing the burden of lifestyle diseases. Millions of people in the developing countries are having the trend of adopting a westernized lifestyle as a result of which the health status of the people is in tremendous risk. Lifestyle diseases are also known as the diseases of longevity and disease of civilization (Carrera-Bastos, P., Fontes-Villalba, M., O'Keefe, J. H., Lindeberg, S., & Cordain, L. (2011). According to world health organization world, deaths from the lifestyle will double by 2015 if not some efforts are taken to fight them. It is necessary to develop a healthy lifestyle than to think deeply about our works. Over the 50 years the lifestyle changed and which changed our diet, now we are consuming more processed foods, foods with high amount of fat, food with sugar content less and less green vegetables and fruits. The result is the drastic change and it shows 30% carbohydrates, 13 % protein, 45% fats and 22% sugar, but the requirement is still the same. Decreases physical exercise of human, as machine are taking the place of that and it leads less use of energy and thus leading to disease like obesity, hypertension, stroke. If we consume

more junk foods, use of packed foods for a long period of time, it leads to disease like Arthritis, cancerous growth. Now we can say that there is excessive use of computers by the population and it leads to diseases like asthma, stress. Increasing globalization has affected the society in many positive and negative ways and brings nothing but the changing lifestyle. This kind of inappropriate relationship of people with their environment arises various lifestyle diseases and economic development has led to a high rate of lifestyle changes. The following is the detailed description of different lifestyle diseases based on the field study.

According to a report published by the National Centre for Health Statistics for the year 1900 and 1938, the three main causes of death in the United States were pneumonia, tuberculosis, and diarrhea. At that point of time, lifestyle diseases like heart diseases and cancer accounted for less percentage of death in comparison to the communicable diseases which accounted for more than 60 percentage of all death.

But, after 1940's the trend has changed, most deaths in the US have resulted from lifestyle diseases like heart disease and cancer and by the late 1990 lifestyle diseases accounted for more than 60 percentage of all deaths. In 2004, the average life expectancy was estimated at 77.8 years. On the other hand, what was viewed as age- related diseases in the mid-20th century, for example, Diabetes, hypertension, Heart sickness and Obesity, is no more the case. These sicknesses are presently influencing more youthful individuals from the population in the western world.

1.1 Causes of Lifestyle Diseases

The primary reason which is responsible for triggering lifestyle diseases among the people is the lifestyle of the people. There are a number of lifestyle factors, for instance, lack of sleep, unhealthy diet, consumption of excessive alcohol, smoking, lack of physical activity etc. which contributes to the emergence of lifestyle diseases. Some of the causes are discussed below:

1.1a Controllable Risk Factor

It includes habits, behaviors and practices that can change, like

Poor lifestyle choices-Lifestyle diseases are sometimes referred to the disease of civilization and disease of longevity. An estimate made by the World Health Organization states that the number of deaths caused by lifestyle diseases will get double at the end of the year 2015, until and unless an organized action plan to combat the same is taken. A healthy lifestyle is the need of the hour. Over the last few decades, the lifestyle of the masses has changed. Consumption of junk foods

which contain a high amount of fat, baked food, consumption of food with high sugar content has increased. Intake of green vegetables and fruits has decreased dramatically, which has affected the well-being of the people. The workforce should not only be healthy, but also productive.

Sedentary habits-Sedentary habits mean inactiveness. A sedentary lifestyle can bring about a number of lifestyle related health issues. Inactivity can bring about a gain in weight, which has serious repercussions. A gain in weight can give rise to health risk, such as obesity, diabetes, heart disease, blood pressure, stress etc. A sedentary lifestyle also has the propensity to increase the chances of anxiety, depression etc. Sedentary lifestyle, therefore, has serious issues.

Alcohol intake and Smoking-Intake of Alcohol and Smoking affects the health of a person in many ways. On one hand, excessive alcohol intake can lead to high risk of getting injuries, damaging the liver, death or can cause diseases such as obesity, cancer, stress etc. On the other hand Smoking, cigarette can major risk factor which can cause heart attack, strokes, chronic obstructive pulmonary disease (COPD) and cancer. Individuals who smoke is not only exposed to nicotine, tobacco, tar, carbon monoxide, but also to at least 50 other toxic chemicals.

High salt intake-High salt intake in daily food can give rise to the problem of blood pressure. If the level of salt in the food is increased it can cause various lifestyle diseases such as stroke, high blood pressure, cardiovascular diseases etc.

Tobacco-World Health Organization has estimated that consumption of tobacco kills 5 million people per year. Tobacco contains a harmful ingredient which is the single most cause of death. Tobacco consumption leads to cancer.

1.1b Uncontrollable Risk Factor

Age- the body has a harder time protecting itself as it ages (Pierpaoli, W., Regelson, W., & Colman, C. 1996).

Gender- some diseases are more common among members of one gender (men- heart disease, women- breast cancer) (Bird, C. E., & Rieker, P. P. 1999).

Ethnicity- African Americans are more likely to develop high blood pressure, Mexican Americans- higher risk of diabetes, Asians lower risk of heart disease, European decent- higher risk of heart disease. (Yusuf, S., Reddy, S., Ôunpuu, S., & Anand, S. 2001).

Heredity- a genetic disease which is caused by inheritance of certain lethal genes from parents like hair or eye color.(Lambert, H., & Rose, H. (1996).

1.2 Prevention of Lifestyle Diseases

There is a saying, it is better to prevent and prepare than to repent and repair. There are a different mechanism if adopted can lead to prevention of lifestyle diseases.

Some of them are discussed below:

Physical activity interventions-Physical activities can bring about a number of positive impacts on the health status of the people and it has a direct, indirect and cumulative effect in reducing cardiovascular diseases which causes number of deaths (Haskell, Leon, and Caspersen 1992; McBride et al. 1992). Physical activity in the form of regular exercise can help to prevent diseases and illness. Physical activity has the tendency to act directly on the cardiovascular system and by bringing positive changes in the metabolism, body weight, composition etc. Various scientific evidences have proved that long term and regular exercise can help reduce the probability of getting morbidity than short term exercises.

Dietary lifestyle interventions in chronic disease-There is an immense need of making a better lifestyle choices in terms of healthy food, nutrient rich food etc. Individuals should be encouraged to undertake healthy food choices. Daily food intake should include consumption of fruits, green vegetables, low-fat foods or fat-free foods, limiting of Trans fat, cholesterol salt and sugar. The Overall diet should be looked upon and a healthy eating plan should be chalked out (Popkin 2001a, 2001b).

Smoking Cessation-Smoking cause's number of health related issues. People who smoke are exposed to numerous harmful chemicals such as nicotine, tar, etc. which affects the health of the people at large. Anti-smoking advertisements, media messages, should be popularized and the youth people should be the target population. Smokers should be given counseling and pharmacotherapeutic intervention. Smokers should be made aware of the harmful effects of nicotine and other harmful chemicals. Stringent laws should be made to deter smoking in public places.

Alcohol abuse-According to The National Health and Medical Research Council (NHMRC), abuse of alcohol for a longer period of time is directly related to heart disease, cancers, obesity, malnutrition, mental health issues, and liver diseases. The NHMRC also identifies cirrhosis of the liver to be most commonly caused by alcohol abuse. The harmful effects of alcohol consumption should be noted seriously and use of alcohol should be abandoned.

Stress-Stress can lead to increased risk of coronary heart disease and cardiovascular death. Stress has a significant impact on the psychological system, hormonal dysfunction, etc. Furthermore, stress also results in the selection of poor dietary choices, use of a substance like drugs and alcohol and sedentary lifestyle. Numbers of interventions are there which can help to combat stress and its related issues. Interventions include moral and psychological support, regular exercise, timely taking of food, balanced diet, optimism etc. The counselor should be well equipped with techniques and should be experienced to deal with stress patients.

Chapter 2

Review of Literature

According to the report of World Health Organization 2004, Non-Communicable Diseases (NCDs) which are caused as a result of lifestyle risk factors accounts for almost 60% of mortality in the world followed by 47% of the global burden of diseases. In the context of India, 53% of the death in 2008 took place due to NCDs and cardiovascular disease accounted for 24% of all deaths. Lifestyle practices which are improper and sedentary, pose a significant threat to the general well- being of the people. People should undertake healthy lifestyle choices so as to establish a proper health status, healthy lifestyle choices is a mandatory condition for maintaining healthy life style (Morimoto, 2000).

In the modern world due to the advancement of technology, better access to sanitation, vaccination, and improved medical attention has removed the risk of death from the infectious diseases which was rampant earlier (De, Rudra Jhilam, 2009). It implicates that that mortality from lifestyle diseases, for instance, heart disease, cancer, diabetes, obesity is rising day by day. One day all have to die, but there is the maximum probability of lifestyle diseases taking the life of the people much before their time. In the context of India, the circumstance is truly disturbing. The disease profile is evolving quickly.

The World Health Organization (WHO) has recognized India as one of the countries that is going to have the vast majority of the lifestyle issue sooner rather than later. These days, lifestyle issues are getting to be more basic, as well as influencing the most youthful populace.

Officially considered the diabetes capital of the world, India now seems headed towards increasing another questionable refinement of turning into the capital of lifestyle diseases. A study led mutually by the All India Institute of Medical Sciences and Max Hospital demonstrates the rate of hypertension, stoutness, and coronary illness is expanding at a disturbing rate, particularly in the youthful, urban population. As indicated by specialists say, an inactive way of life consolidated with an increment in the consumption of junk food and liquor is responsible for the increase in weight, diabetes, hypertension etc.

Lifestyle has a strong correlation with the occurrence of chronic diseases. There are a number of diseases that are associated with common lifestyle risk factors. WHO has found out that Non-Communicable Diseases (NCDs) such as diabetes, cardiovascular diseases and cancer has

long been associated with the development of many chronic diseases due to lifestyle factors. Lifestyle related risk factors include lack of physical activity, lack of sleep, smoking, use of tobacco, consumption of harmful alcohol etc. (Gupta, Sanjay et.al, 2014).

Lifestyle diseases are those categories of diseases which occur due to the improper habits of the people and the improper relationship of the people with the environment. Bad food habits, wrong body posture, lack of physical exercise are the main factors which contribute to the occurrence of lifestyle diseases. A joint report which was prepared by World Economic Forum and World Health Organization stated that India will lose an astronomical amount of money, around \$236.6 billion by 2015. The loss will be on account of improper diet and lack of a healthy lifestyle.

As indicated by a survey led by the Associated Chamber of Commerce and Industry (ASSOCHAM), 68% of working ladies in the age section of 21-52 years were discovered to be harrowed with a way of lifestyle factors, for example, weight, depression, unending spinal pain, diabetes and hypertension. The study 'Preventive Healthcare and Corporate Female Workforce' additionally said that working under extends periods of time and working under immense pressure cause up to 75% of working ladies to experience the ill effects of depression or general tension issue, contrasted with ladies with lesser levels of mental interest at work.

The study referred to an experimental proof that a healthy eating routine and satisfactory physical action, no less than 30 minutes of moderate movement, no less than five days a week helped to deter NCDs. In India, 10% of grown-ups experience the ill effects of hypertension while the nation is home to 25-30 million diabetics. Three out of each 1,000 individuals endure a stroke.

As per an article published by Indo- Asian News Service in 2014, diabetes, and high cholesterol are hitting more of the young population in the metropolitan cities. Though there is awareness, more than 50% of the men population in major cities of Delhi, Mumbai, Ahmadabad and Chennai suffer from diabetes.

The army and military personnel of a country are expected to live in a better state of health because the military personnel undertake a routine exercise as a part of their life and lead a healthier life, that includes good nutrition and have easy access to health care (Pappachan, MJ 2011).

Lifestyle practices which are improper and sedentary, pose a significant threat to the general well-being of the people. People should undertake healthy lifestyle choices so as to establish a proper health status, healthy lifestyle choices is a mandatory condition for maintaining healthy life style (Morimoto, 2000).

Number of physical activities, for instance, exercise and sports not only relieve the body from mental stress but also help to maintain good healthy relationship (Kahn et al., 2002; Russell et al., 1995). Many report and studies have claimed that therapeutic exercises, sports, physical activities can be very advantageous in prevention and treatment of number of diseases.

People make number of lifestyle choices that in turn affects their health status. The choices which they make are made through their own will and are not binding upon them. The decision, choices that people make through free will should be informed and responsible (Wiley, 2014).

2.1 Common Lifestyle Diseases

Lifestyle diseases have become very common amongst the masses in the contemporary era. Various research studies have claimed that lifestyle diseases such as Blood Pressure, Obesity, Diabetes, Arthritis, Stress, and Asthma are increasing in frequency. A research study, which was conducted by World Health Organization, has claimed that blood pressure has brought about 7.5 million deaths, and around 12.8% of the aggregate of all deaths. Some of the common lifestyles diseases are discussed below:

Blood pressure can also trigger heart stroke along with circulatory strain. Blood pressure has the tendency to develop over many years, and it affects everyone. There are a number of causes which can result in blood pressure, too much of smoking, Consumption alcohol, stress, salt in the diet, older age and lack of physical activity. WHO studies has also found out that men have a somewhat higher tendency of developing blood pressure.

According to DA Victoria 2002, around 7.4% of the populations of Australia who are aged above 25 years have diabetes. There is a greater chance of developing diabetes when there is a high content of glucose in the blood. The content of glucose increases when there is more intake of food that contains carbohydrates such as potatoes, bread, milk, bread, etc. When there is a high level of glucose in the blood level, it can damage parts of the body over time. The risk of developing blood pressure increases with age.

According to World Health Organization, Asthma has emerged as one of the major non-communicable diseases. Almost 235 million individuals as of now experience the ill effects of asthma. Asthma is typically prevalent among the youngster. There are various factors which cause asthma, such as airborne allergies, respiratory infections, common cold, physical activity which can cause asthma, cold air, stress and emotions which are strong, air pollutants etc. Also while most deaths that occur because of asthmas preventable. In the United States, more than 3000 individuals die because of asthma every year. Proper diet, education among the masses, and full and dynamic lifestyle can prevent asthma.

Stress is caused when everything around the people becomes excessive and when the schedule is overburdened (Medical News Today, 2014) anything that gives rise to challenges or pose the risk to prosperity, wellbeing is a stress. There are number of hassles which people face from day to day life which may result in stress.

When people suffer from stress number of side effects and health problems can happen, such as problem in breathing, the problem in digestion slows down, heart rate (pulse) rises, the muscle becomes tenser and there is sleepless night. Creating systems to manage stress can forestall or lessen its belongings. There are numerous ways to deal with stress; this includes incorporating physical activity, changes in the eating habits, taking up of different stress management courses.

According to the report published by the Public Health Foundation of India during the year 2012, about 44 lakh Indians in the age group of 21-79 were not even acquainted with the fact that they are suffering from Diabetes. Diabetes is a very serious disease that exposes people to nerve damage, heart stroke, damage of kidney, blindness, etc. The diabetes epidemic has killed almost 10 lakh people during the year 2011 and soon India will be the hub of diabetes surpassing China in a future point of time. According to a survey which was conducted by the Metropolis Healthcare in 2014, 38,966 samples which were screened, 56.81 percent of the cases reported of having high diabetes levels.

According to the WHO report, Asthma has emerged as a public health concern not only for developed countries but also in developing countries. India has an estimated 15-20 million cases of Asthma. Asthma in many cases may be avoidable, but it generally affects the younger population and it occurs in the epidemic. Asthma is caused mainly due to exposure to indoor allergens, exposure to tobacco, smoke, and chemical irritants, smoking etc. Also taking of certain drugs can also be the probable cause of asthma.

2.2 Rationale of the Study

Lifestyle affects the general health and well-being of individuals in various ways. In the modern time, we have to deal with lots of pressure from personal and professional lives. Coping to the demands of life has become a serious concern for many of us. So far as inhabitants of a city is concerned, it is even more prominent compared to the people living in the villages. Industrialized cities remain awake 24/7 as their job demands continuous shift work in the industry and following a healthy routine in daily life becomes a challenge for many of them. Apart from this, we are dependent on machines to do our work in the office. Lack of physical mobility and long hours of unipostural jobs also pose health risks for many. As a result, they develop life-style diseases like hypertension, diabetes, asthma, arthritis, cancer etc. The present study is an attempt to understand whether there exist any relationship between life-style and general health of city dwellers.

2.3 Objectives of the study

Healthy lifestyle activities are generally ignored by people. As a result, they always have the propensity to develop lifestyle diseases. People should be conscious and choosy at the time of selecting food, differentiating between merits and demerits of junk food. Moreover, the choices of the people should be rational. The present study focuses on the existence of lifestyle diseases in the city of Rourkela. The objectives of the proposed study are:-

- 1-To examine the prevalence of common lifestyle diseases among city dwellers of Rourkela
- 2-To examine the various risk factors responsible for the common lifestyle diseases

Chapter 3

Method of Study

This study is based upon the intensive fieldwork conducted in Rourkela, the steel city of Odisha. The fieldwork was conducted during the month of March, 2015 to April, 2015. Both quantitative and qualitative methods were used for the analysis of the data. Ms Word and Ms Excel were used for the data analysis. The study basically applies qualitative data analysis techniques such as observation, formal and informal interview methods are used.

3.1 Study Area

The study was conducted in, Rourkela. Rourkela is a city located in the western part of Odisha. It is the fourth largest city of Odisha after Bhubaneswar, Cuttack and Berhamapur with a population of 273,217. The city is also popularly known as Ispat Nagar and also as the Steel City of Odisha. Rourkela steel plant is one of the largest steel plants of the Steel Authority of India Limited (SAIL).

3.2 Sample

A purposive sampling method was followed to collect information from 100 individual of the Rourkela city out of which were 61 male and 39 were female. The subjects (householders) were informed about the purpose of the study and after obtaining written informed consent to participate in the survey, they were interviewed. The average time taken for interview was 30 minutes per participant.

3.3 Methods of Data Collection

The questionnaire used in this study is a semi structured one. The first part of the questionnaire consists of the declaration and the demographic profile of the participants followed by 9 sections. The latter nine sections contain close-ended questions regarding the practice of health behavior, lifestyle, and health status. The questionnaire sheets surveyed the subjects' age, sex, and the practice of health behavior, lifestyle, and health status. Following is the description of the tool used in the present work. There are 10 sections covering the demography, daily schedule, food habit, physical activity, effective use of leisure time, health condition, wrong choices and habits, work setting, lifestyle diseases and general health respectively.

Section A of the questionnaire contains question-related to demography. Demographic characteristics include Name, Age, Sex, Education, Occupation, Monthly income, Height,

Weight, Mother Tongue, and State etc. Section B of the questionnaire consists of a question which will throw light upon the daily schedule of the sample population. Data related to waking up time of the respondent followed by exercise time, breakfast time, office time, lunch time, dinner time and sleeping time is collected from Section B.

Section C of the questionnaire consists of question-related to Life Style. For instance, question such as the type of food intake in breakfast, lunch and dinner. Also, questions related to intake of fresh food or refrigerated food is presently followed by question-related to fruits and vegetables intake. Questions are also there in relation to taking of fast food. Questions with respect to taking of soft drinks, snacks, adding of sugar in beverages, overeating is also designed. Section D of the questionnaire consists of question-related to physical activity. Questions with respect to the duration of physical activity, kind of games, time spent in sports playing which the respondents play, whether exercise and sports help in keeping a good health etc.

Section E of the questionnaire consists of questions related to Leisure Time. Questions such as what kind of activities respondents do in leisure time followed by the type of household work, time spent with family, whether respondents go for outings on holidays, visiting neighbors etc. Section F of the questionnaire consists of questions relate to hobbies, kind of person whether active, lazy, anxious, laborious etc. of the questionnaire consists of question-related to consumption of alcohol and tobacco.

Section G Questions related to at what age did the respondent started smoking and how many packs do they smoke, whether respondent suffer from any kind of mental health problem or not etc. Section H of the questionnaire consists of a set of questions related to the kind of work environment, length of work hours, work schedule, type of work environment. Section I of the questionnaire consists of questions related to the existence of any lifestyle diseases, its treatment, ability to perform usual daily activities, regular treatment, whether respondents are doing anything to improve health condition, sleeping problem, sleeping time etc.

Section J consists of questions related to the general health of the respondents. For instance, whether the respondents are able to concentrate, loss of sleep over worry, playing a useful part, capable of making decision, able to face problems, thinking of self as worthless, feeling reasonably happy etc.

3.4 Data Analysis

The data was first qualitatively segregated and frequencies calculated for each section. For ease of analysis and graphical representation, they were put in tabular format. Following tabular data, line graph and pie charts were prepared for each individual question. Next chapter discusses the results and findings. All data in the tables and figures are in percentages.

Chapter 4

Results and Findings

The result of the present study was analyzed section wise starting from the demographic profile of the participants. The other sections constitute their daily schedule, food habit, exercise and physical activity, effective use of leisure time, health condition, wrong choices and habits, work environment, known diseases and general health. The percentages were calculated for each domain and plotted in line graphs and pie charts. Demographic characteristics include Name, Age, Sex, Education, Occupation, Monthly income, Height, Weight, Mother Tongue, and State etc. The socio-demographic characteristics of study participants are shown in Table 1. So age break up of total 100 subjects studied shows that; age groups of 40-49 (42%) years and 50-59(42%) years was the most represented compared to 30-39 years of age group(15%) and 60 and above(1%). Around 61% are male and 39% are female out of 100 and the average height and weight of the male is 5.6 and 70 kg and the average height and weight of female is 5.3 and 65 kg. The percentage of mother tongue is 66% odia followed by 24% Hindi, 5% Bengali, 2% Bhojpuri, and 1 % Marwari, Chhattisgarhi and Punjabi. Regarding the respondent's profession, it was noted that more than half, i.e. 65% of subjects were steel plant employee, followed by others like teacher 14%, engineer 4%, officer 3%, doctor 3%, manager 2%, advisor 2%, technician 2%, businessman 2%, self-employed 2% and then banker which is 1%. The respondents who works in non-shift is 65% and 35% shift. The monthly income range from 26k-50k (53%), above 50k (28%) and 10k-25k (19%). Around 85% of the sample population are married followed by unmarried (5%), widow (5%), divorced (2%), separated (2%) and widower (1%). Around 69% of the sample population belongs to Odisha followed by Bihar (12%), Bengal (5%), Jharkhand (4%), Chhattisgarh (3%), U.P (3%), Punjab (2%) and Rajasthan, M.P (1%).

Table No 1. DEMOGRAPHIC PROFILE (N=100)

Age Groups	Sex	Height (Average)	Weight (Average)	Mother Tongue	Education in Completed Years	Occupation	Duty Hours	Monthly Income	Marital Status	State to Which you Originally Belong
30-39 (15)	Male (61)	Male(5.6)	Male(70)	Bengali(5)	5-10(10)	Advisor(2)	Non-Shift(65)	10K-25K(19)	Married(85)	Bengal(5)
40-49 (42)	Female(39)	Female(5.3)	Female(65)	Bhojpuri(2)	11-15(66)	Banker(1)	Shift(35)	26K-50K(53)	Unmarried(5)	Bihar(12)
50-59 (42)				Chatisgaria(1)	16-20(24)	Businessman(2)		Above 50K(28)	Divorced(2)	Chattisgarh(3)
60and above (1)				Hindi(24)		Engineer(4)			Separated(2)	Jharakhand(4)
				Odia(66)		Doctor(3)			Widow(5)	M.P.(1)
				Marwari(1)		Manager(2)			Widower(1)	Odisha(69)
				Punjabi(1)		Officer(3)				Punjab(2)
						Steel Plant(65)				Rajasthan(1)
						Self-Employed(2)				U.P.(3)
						Teacher(14)				
						Technician(2)				

Figures in Parentheses show percentages of respondents across variables except for height and weight.

4.1 Daily schedule

Our daily routine makes a huge difference to stay healthy, happy and how useful we are. If exercise and regular physical activity benefit the body, an inactive lifestyle does the opposite, increasing the probability of becoming overweight and making us vulnerable to a number of lifestyle diseases like obesity, heart diseases etc. Lack of exercise, a poor diet and other bad habits can take their toll over the year. The food we eat can reduce the risk of heart disease and stroke. People should choose foods with low fat, cholesterol, sodium etc. We should eat plenty of fruits, fiber rich whole grains, fish, nuts and green vegetables in order to live a healthy life.

Wake up -When it was asked to the respondents about their wake up time, around 39% of the sample population responded 6 am followed by 31% responded 7 am, 14% 5 am, 10% responded 4 am, 5% responded 8 am and 1% responded 9 am in the morning.

Exercise -When it was asked to the respondents about their exercise time, around 29% of the sample population responded 6 am in the morning followed by 21% responded 8 am, 17% responded 7 am, 6 % responded 6 pm in the evening because lack of time, 6% responded 6 pm, 6% responded 7 pm, 1% responded 4 am and 1% responded 5 am and 17% of the sample population are not indulged in any kind of physical exercise.

Breakfast-When it was asked about their breakfast time, around 54% of the sample population responded that they take breakfast usually at 8 am in the morning followed by 28% responded 9 am, 11% responded 7 am, 4% responded 10 am and 3% responded 6 am.

Office -When it was asked about their office time, around 46% of the sample population used to go office at 9 am followed by 36% 10 am, 9% 10 am, 4% 11 am, 2% 12 pm, 2% 1 pm and only 1% 10 pm at night.

Table No. 2 Daily Schedule (24 Hours)

Time	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5
Wake up Time	39	31	5	1																			10	14
Exercise Time*	29	17	21	3	1	2	6	2															1	1
Breakfast Time	3	11	54	28	4																			
Office Time			9	46	36	4	2	2									1							
Lunch Time							29	29	36	6														
Dinner Time														1	10	28	47	14						
Sleeping Time																1	22	55	16	3	3			

*No Exercise-17

N=100

Lunch -When it was asked about their lunch time, around 36% of the sample population responded they take lunch at 2 pm followed by 29% responded 12 pm and 29% responded 1 pm and 6% responded 3pm.

Dinner-When it was asked about their dinner time, around 47% respondent said that they take dinner at 10 pm, followed by 28% responded 9 pm, 14% responded 11 pm, 10% responded 8 pm and only 1% responded 7 pm

Sleeping -When it was asked about their sleeping time, around 55% of the sample population responded that they sleep at 11 pm at night, followed by 22% responded 10 pm, 16% responded 12 am, 3% 1 am, 3% 2 am and only 1% responded 9 pm.

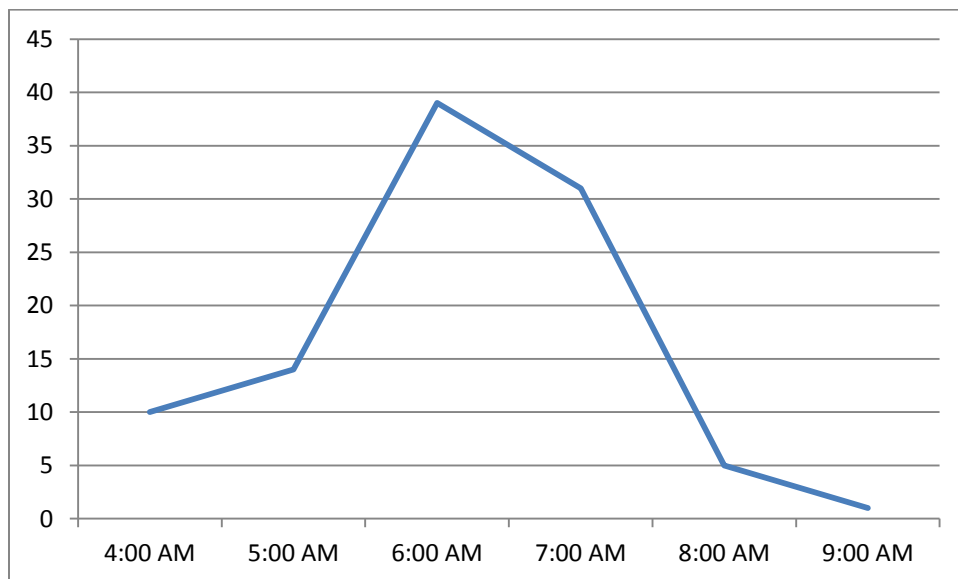


Figure No. 1 Wake-Up Time

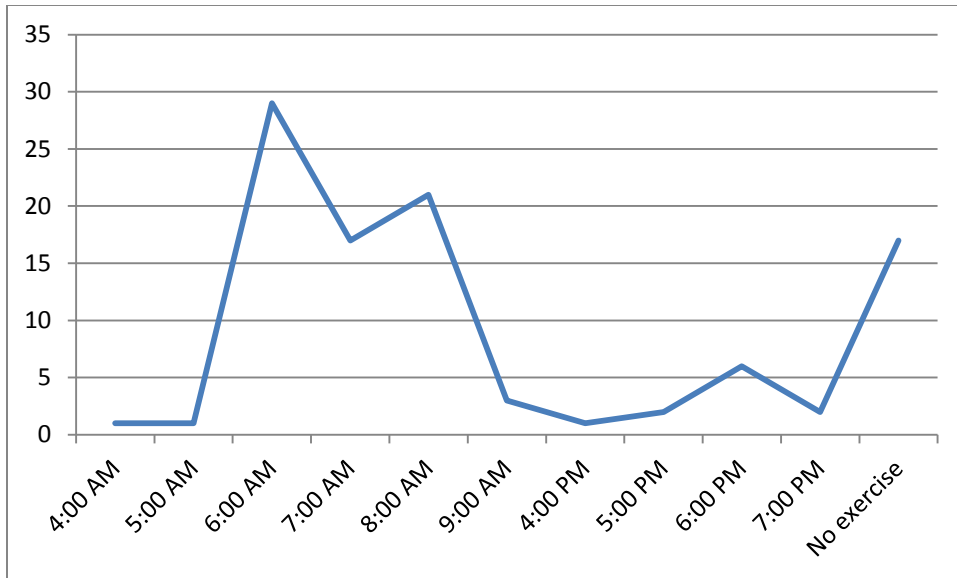


Figure No. 2 Exercise Time

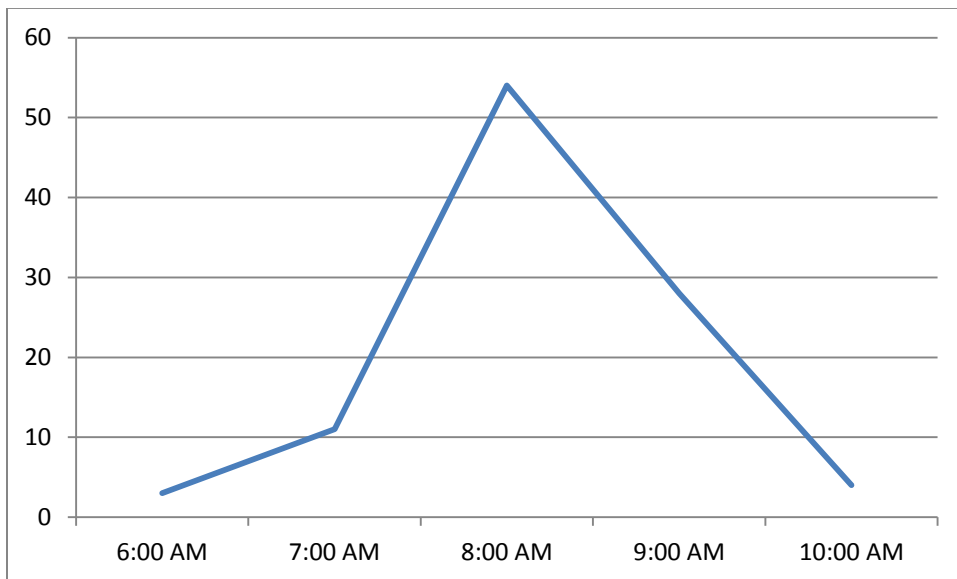


Figure No. 3 Breakfast Time

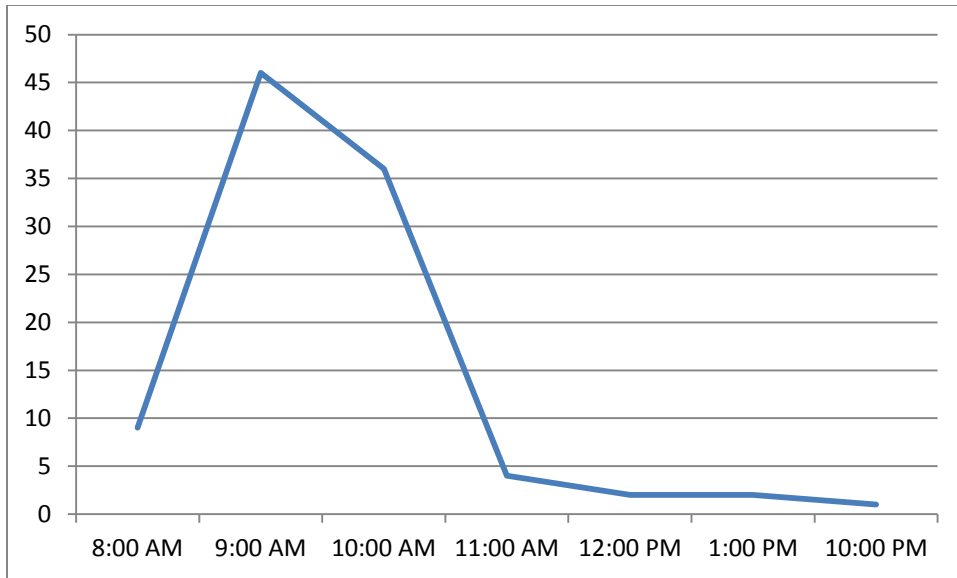


Figure No. 4 Office Time

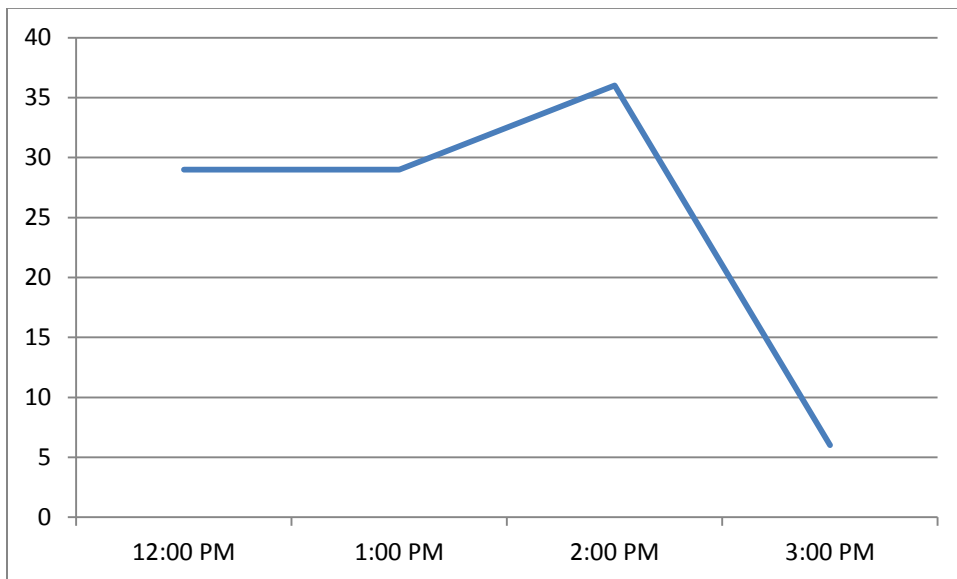


Figure No. 5 Lunch Time

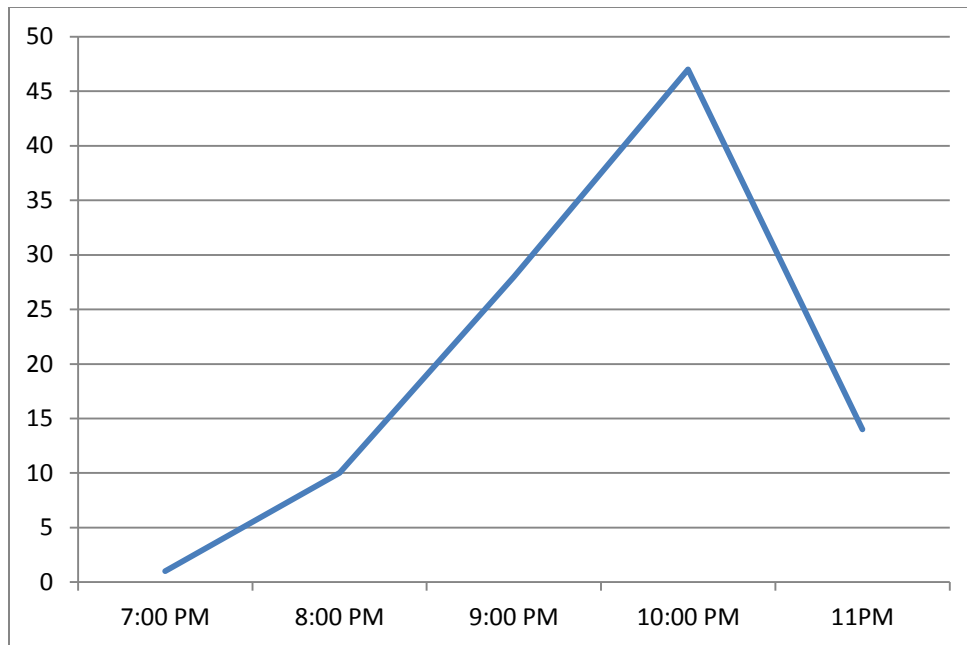


Figure No. 6 Dinner Time

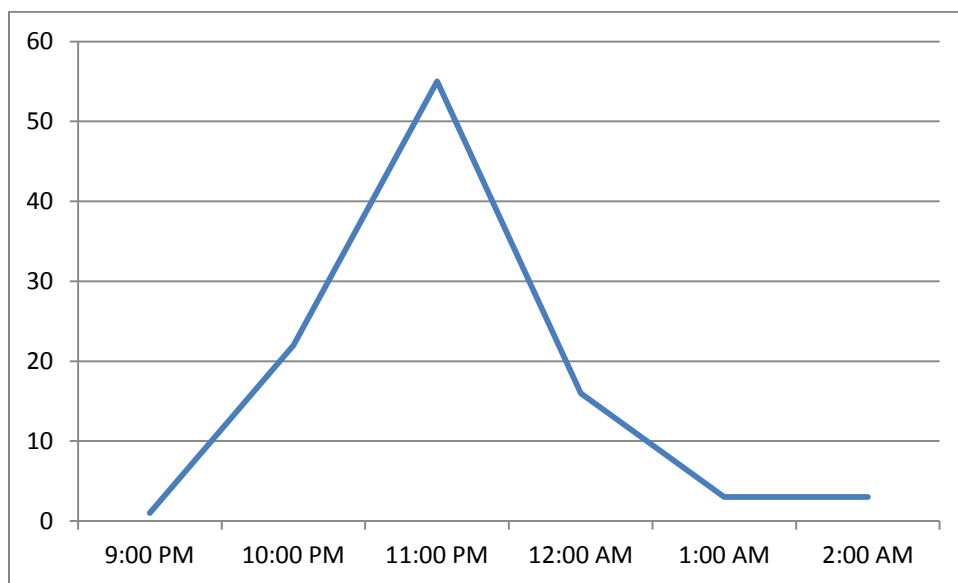


Figure No. 7 Sleeping Time

4.2 Food Habit

As we know that an active lifestyle and proper nutrition can help to lead a longer, healthier and happier life. A balanced diet of nutritious foods and regular physical activity decreases the risk of developing certain lifestyle diseases and also prevents many diseases. Being active reduces the risk of getting some important lifestyle diseases such as coronary heart disease, diabetes or hypertension. Diet is one of the most important factors in maintaining good health. Eating a balanced diet rich in fruits, vegetables, proteins, healthy fats, whole grains, nuts and legumes provides the nutrients required for energy, a strong immune system and healthy internal organs and consuming the right foods helps protect us from various common lifestyle diseases, including heart disease, stroke, diabetes, obesity, which is a major risk factor for disease.

Breakfast-When it was asked about what do they take in breakfast, around 69% of the sample population takes roti and sabji in breakfast, 18% responded bread and butter followed by 6% cornflakes and milk, 2% responded dal and roti, 2% responded dosa and idli, 1 % responded chuda and banana, 1% responded soup, and 1 % puffed rice. When it was asked do they take breakfast on a daily basis or not, around 76% of the sample population takes breakfast in a regular basis on the other hand around 24% of the sample population takes breakfast sometimes.

Lunch-When it was asked what they take in lunch, around 61% of the sample population takes rice, dal and sabji in lunch while 39% of the sample population takes rice, roti, dal and sabji.

Dinner-When it was asked that what they take in dinner, around 75% of the sample population takes roti, sabji and dal in dinner followed by 18% responded rice, dal and sabji, and 7% responded roti, sabji, salad.

Fresh cooked/Refrigerated-When it was asked whether they take freshly cooked food or refrigerated, around 87% of the sample population eats freshly cooked food while 13% eats refrigerated sometimes.

Microwave Food-When it was asked that how often do they use microwave, around 38% of the sample population never used a microwave, while 34% of the sample population used microwave rarely followed by 22% responded always and 6% responded sometimes.

Extra Salt-When it was asked that whether they add salt while eating or not, around 74% of the sample population adds salt to their food while eating and 26% of the sample population do not add salt to their food.

Table No.3 Food Habit

Breakfast	Roti, Sabji(69)	Bread & Butter (18)	Cornflakes& milk (6)	Dal & roti (2)	Dosa&Idli (2)	Soup (1)	Puffed Rice (1)
How often Breakfast	Always(76)	Sometimes(24)					
Lunch	Rice,dal,Sabji(61)	Rice, dal,Sabji,roti (39)					
Dinner	Rice,dal, Sabji(75)	Rice, dal,Sabji,roti (18)					
Fresh cooked/Refrigerated	FreshCooked (87)	Refrigerated (13)					
Microwave Food	Always (6)	Never(38)	Rarely (34)	Sometimes (22)			
Extra Salt	Yes(74)	No(26)					
Fruits and Vegetables	1 time Per day (72)	2 times Per day (19)	3 times Per day (4)	None(5)			
Dietary Supplements	Vitamin Capsules (8)	None (92)					
Diet type	Low Carbohydrate(15)	Low Cholesterol(7)	Low salt (1)	No special Diet(64)	Vegetarian (11)	Weight Reduction (2)	
Filter water	Yes(95)	No(5)					
Eat Fast Food	Yes(73)	No(27)					
How often eat Fast food	Almost every Day(1)	Never(27)	Once in a Month(60)	Once in a Week(12)			
Restaurant visit	Once in a Month(72)	Never(9)	Once in a Week(19)				
Why eat out	How healthy it is(2)	It tastes better than anything at home(59)	Its something I & my friends do(27)	I don't eat out(10)	My parents don't cook much(2)		
Preferred Beverages	Juice(74)	Diet soda(8)	Energy drink(10)	None(8)			
How often soft drink	Everyday (4)	More than once in a week(10)	Never (34)	Once in a day (18)	Once in a week(34)		
Decision on food	How healthy it is (42)	How it tastes (23)	How much it costs (34)	What is the calories of of the food			
Favourite snacks	Baked food (46)	Chocolate,Fruits (10)	Golgappa,Samosa (44)				
Eating when not Hungry	Yes (79)	No (21)					
Why eat when not Hungry	I do it because its fun to eat	I don't overeat when i am not	I do it because i am				

Add teaspoons of sugar	One (43)	Two (53)	Three (4)		
Beverages you Drink often	Tea (77)	Coffee (21)	Energy Drink (2)		
How often drink Beverages	2-3 times (71)	4-5 times (27)	None (2)		
Why energy drinks	Need energy (18)	No(31)	Stay awake (14)	Concentration (37)	
Cooking oil used At home	Musturd Oil(46)	Vegetable Oil(54)			

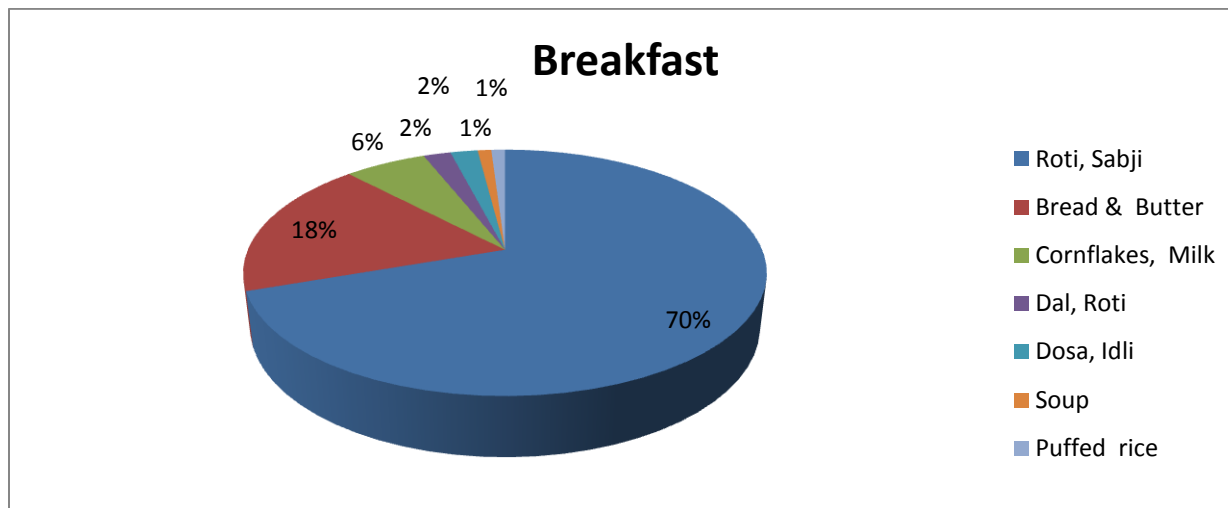


Figure No. 8 Breakfast

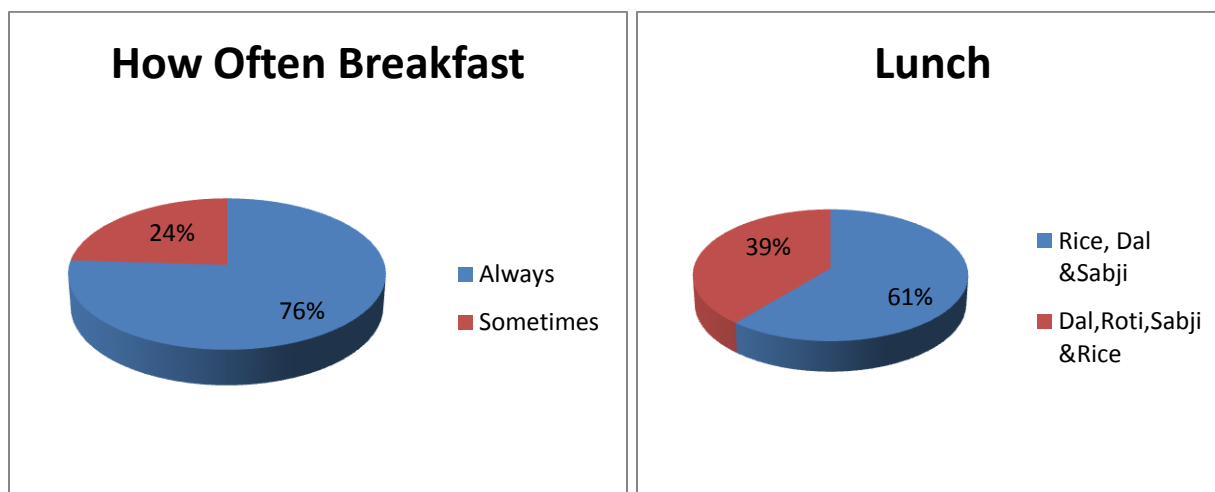


Figure No. 9 How often Breakfast

Figure No. 10 Lunch

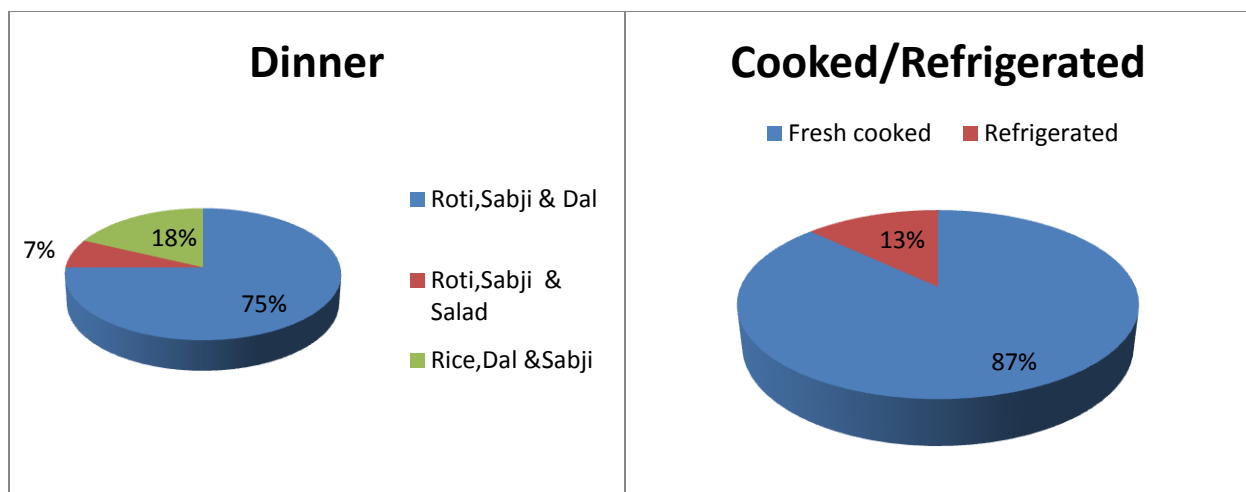


Figure No. 11 Dinner

Figure No. 12 Cooked/Refrigerated

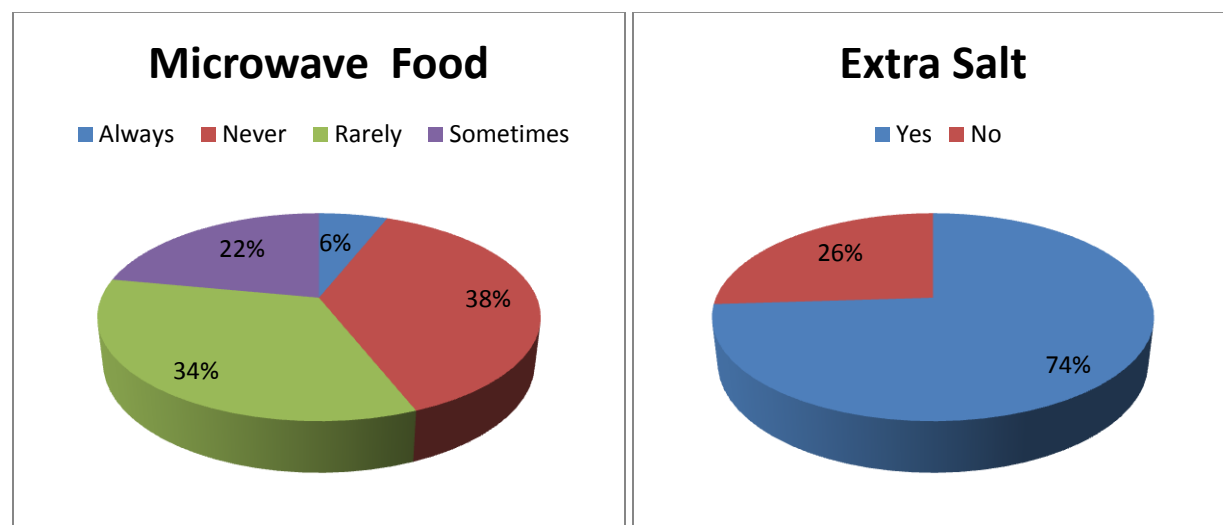


Figure No. 13 Microwave Food

Figure No. 14 Extra Salt

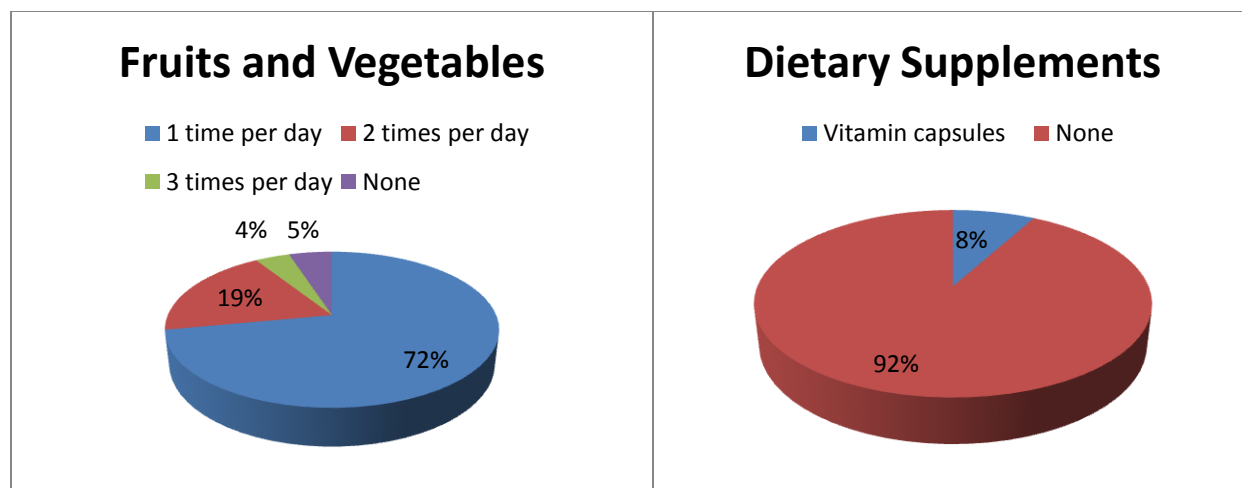


Figure No. 15 Fruits and Vegetables

Figure No. 16 Dietary Supplements

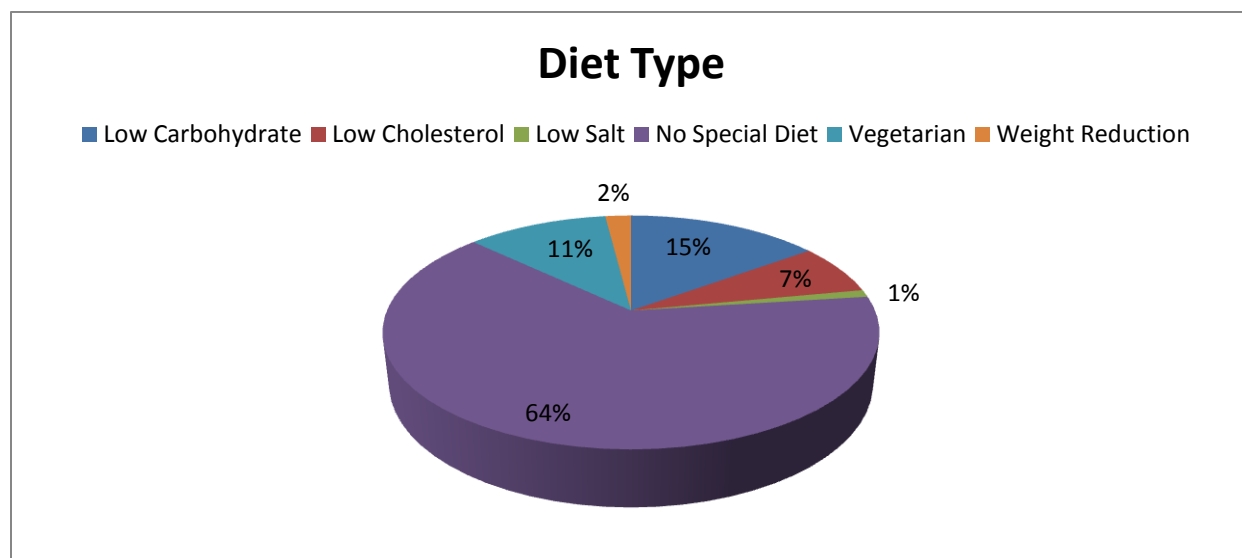


Figure No. 17 Diet Type

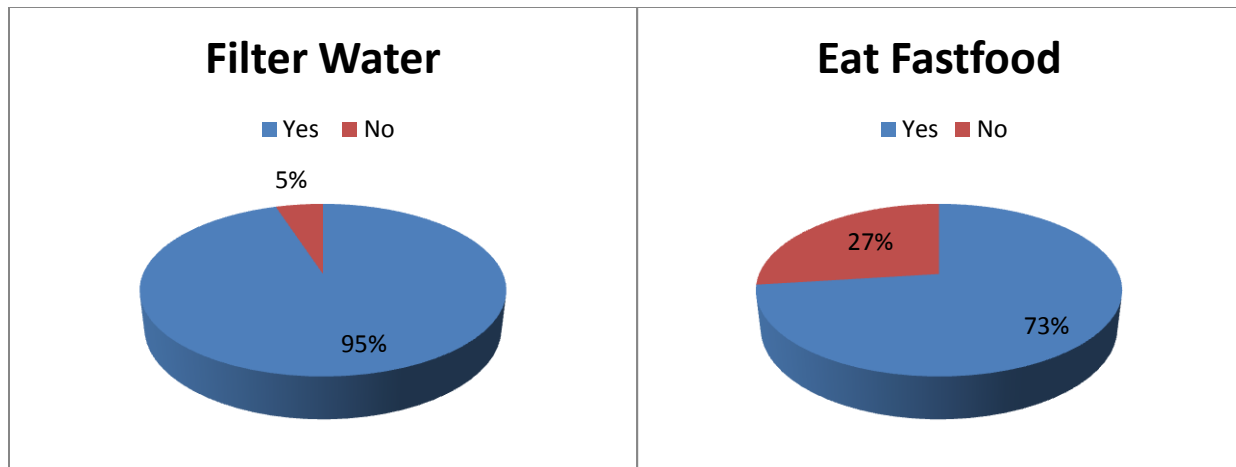


Figure No. 18 Filter Water

Figure No. 19 Eat Fast Food

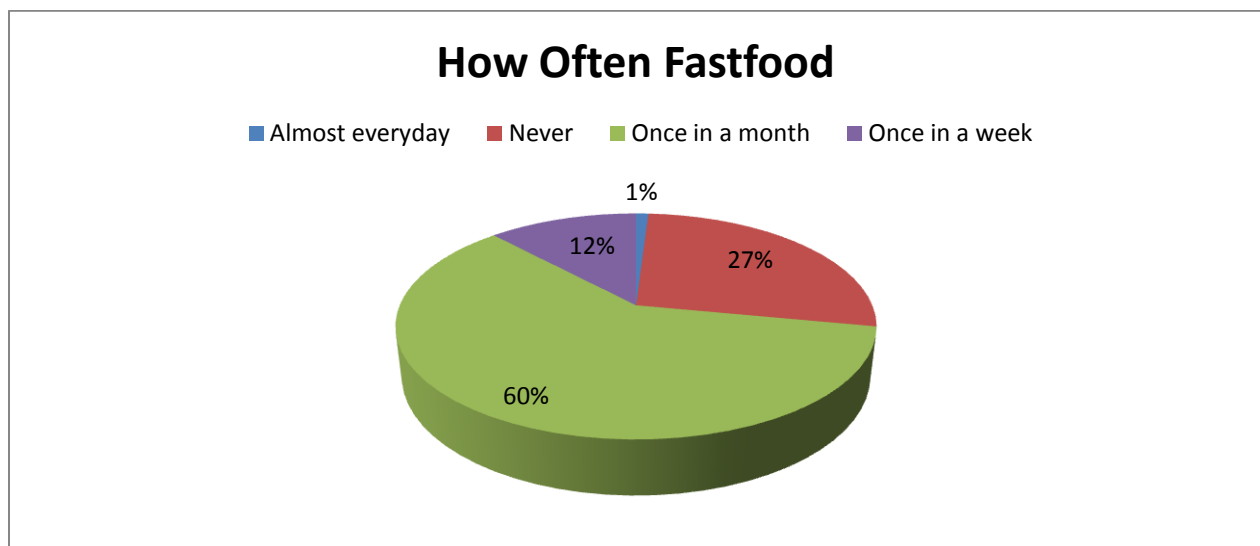


Figure No. 20 How often fast food

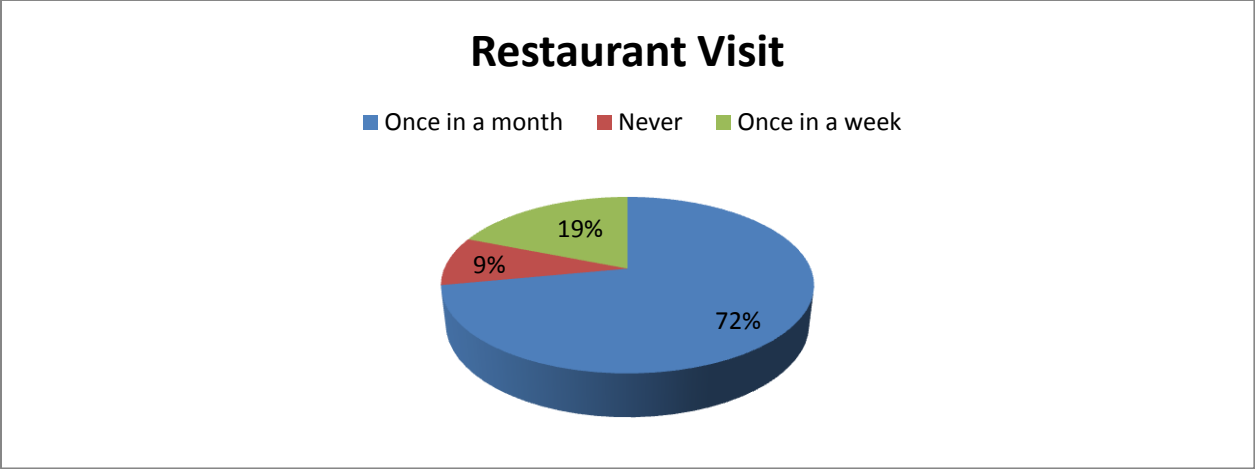


Figure No. 21 Restaurant Visit

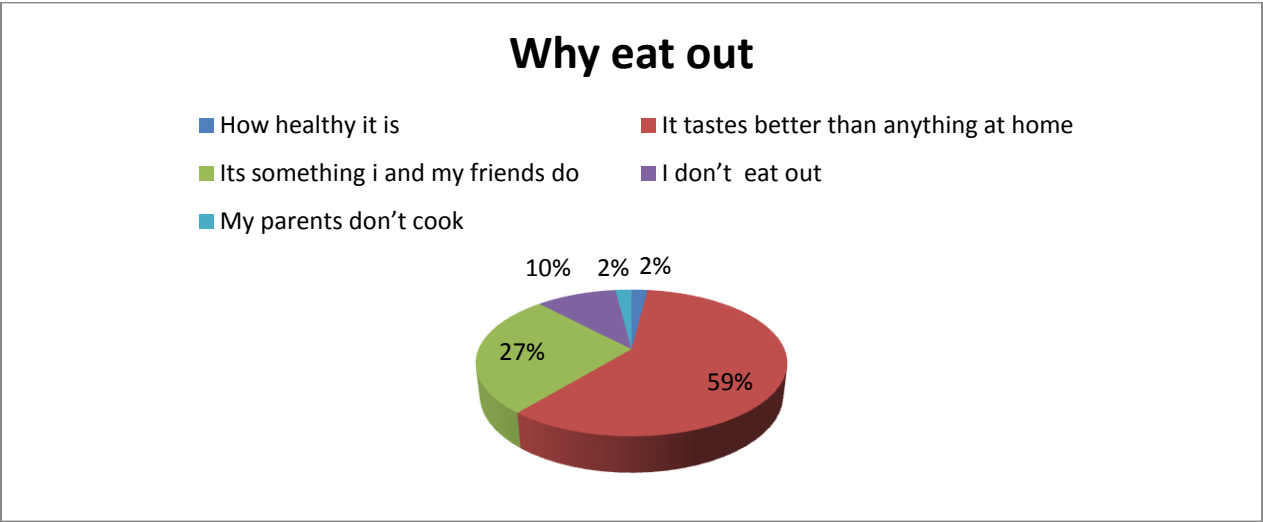


Figure No. 22 Why eat out

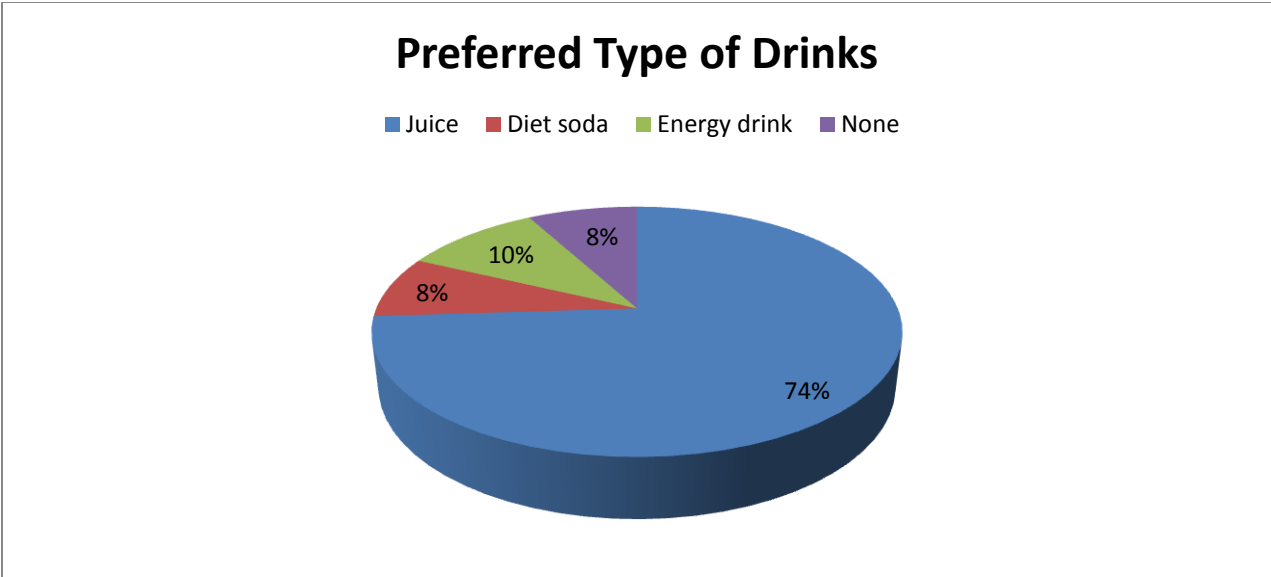


Figure No. 23 Preferred Types of Drinks

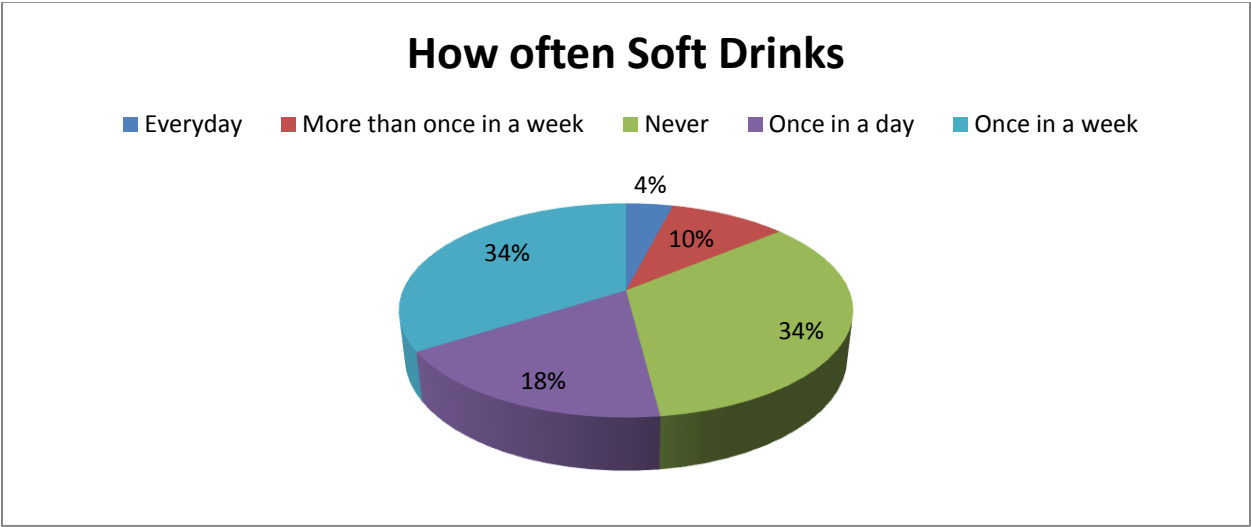


Figure No. 24 How often Soft Drinks

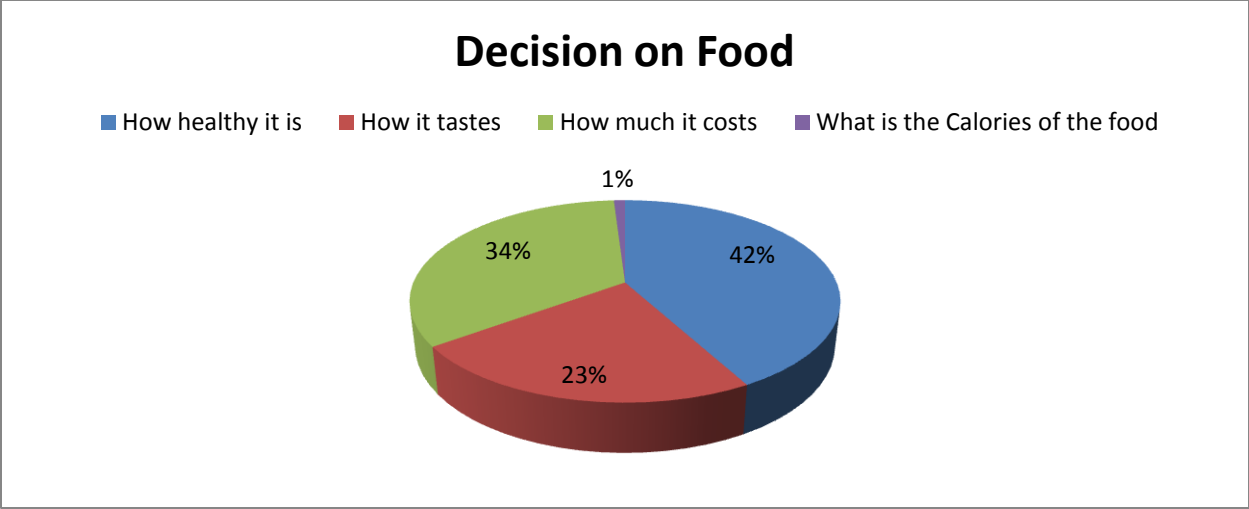


Figure No. 25 Decision on Food

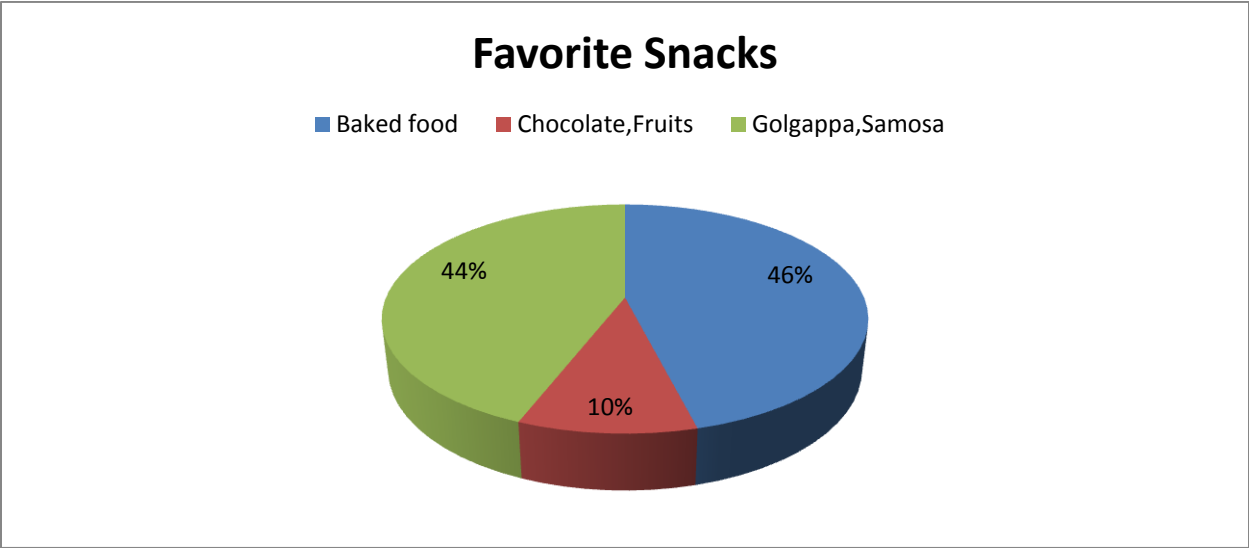


Figure No. 26 Favorite Snacks

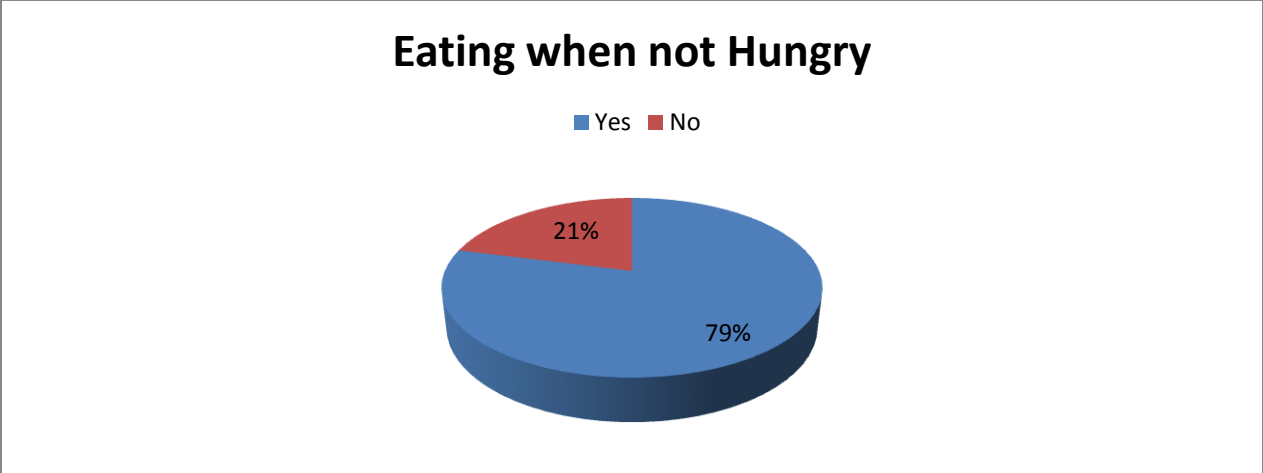


Figure No. 27 Eating when not hungry

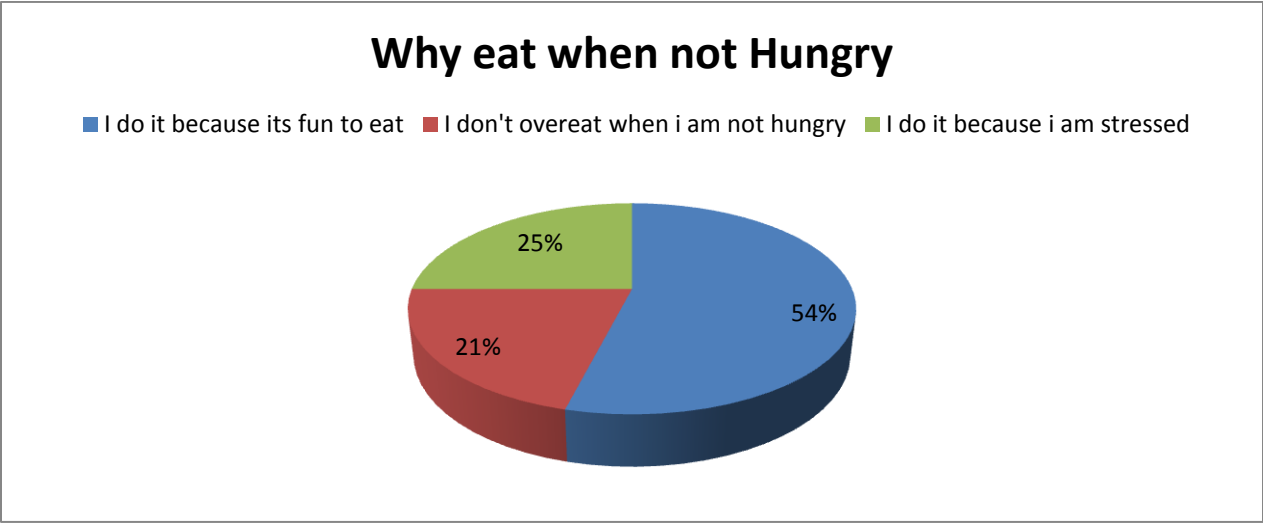


Figure No. 28 Why eat when not hungry

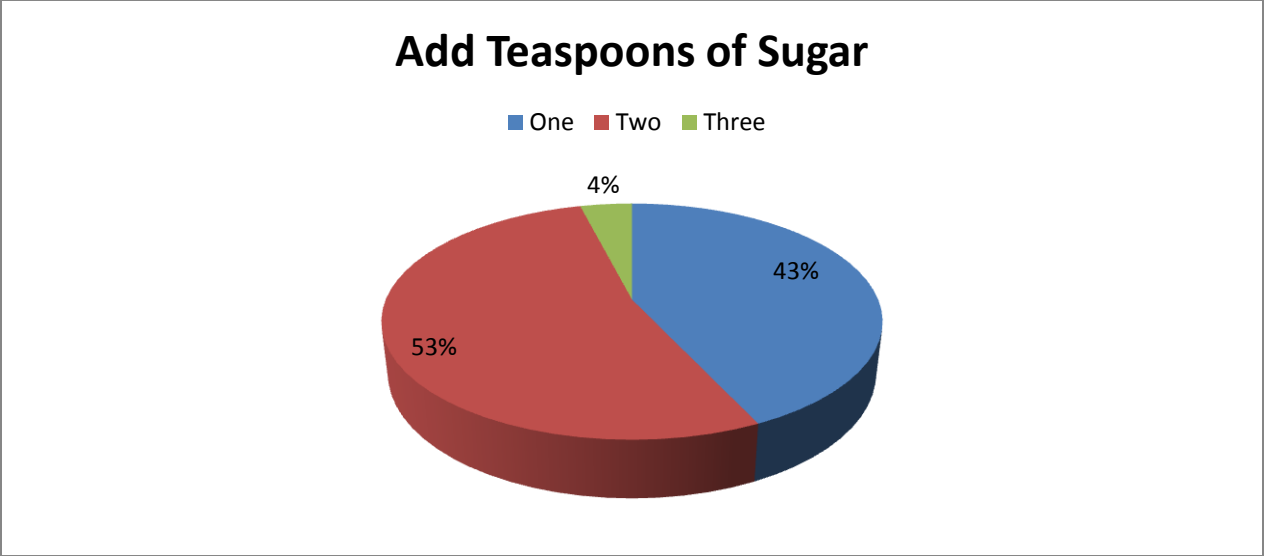


Figure No. 29 Add teaspoons of sugar

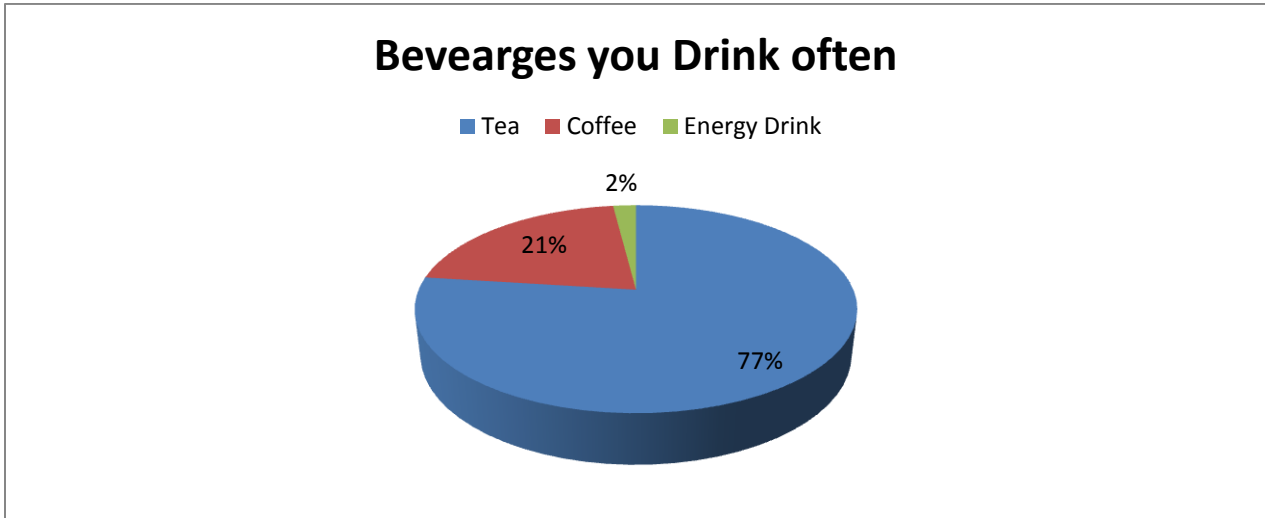


Figure No. 30 Beverages you drink often

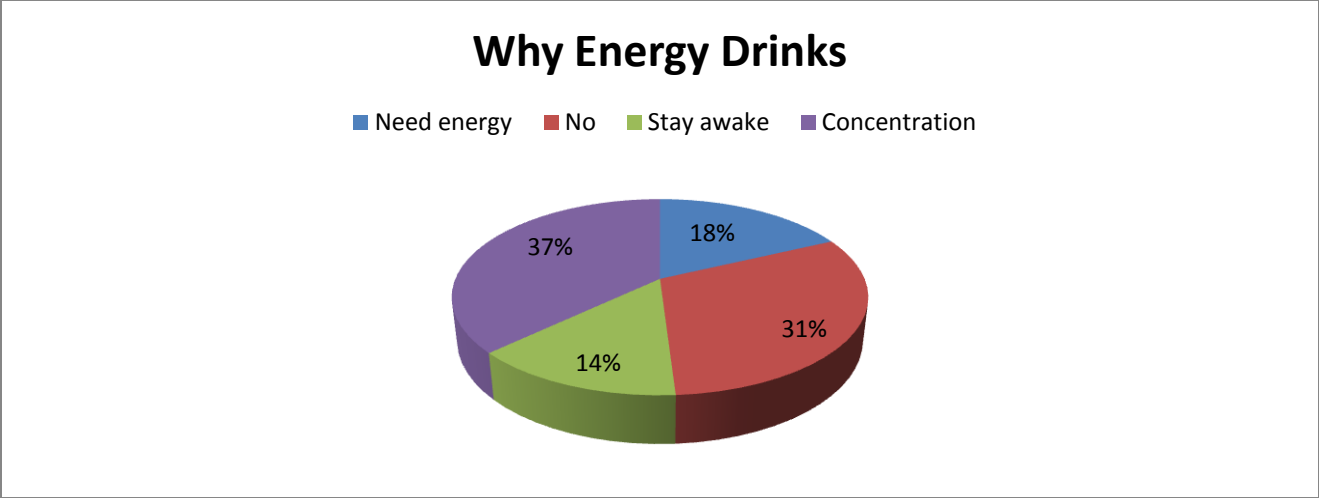


Figure No. 31 Why energy drinks

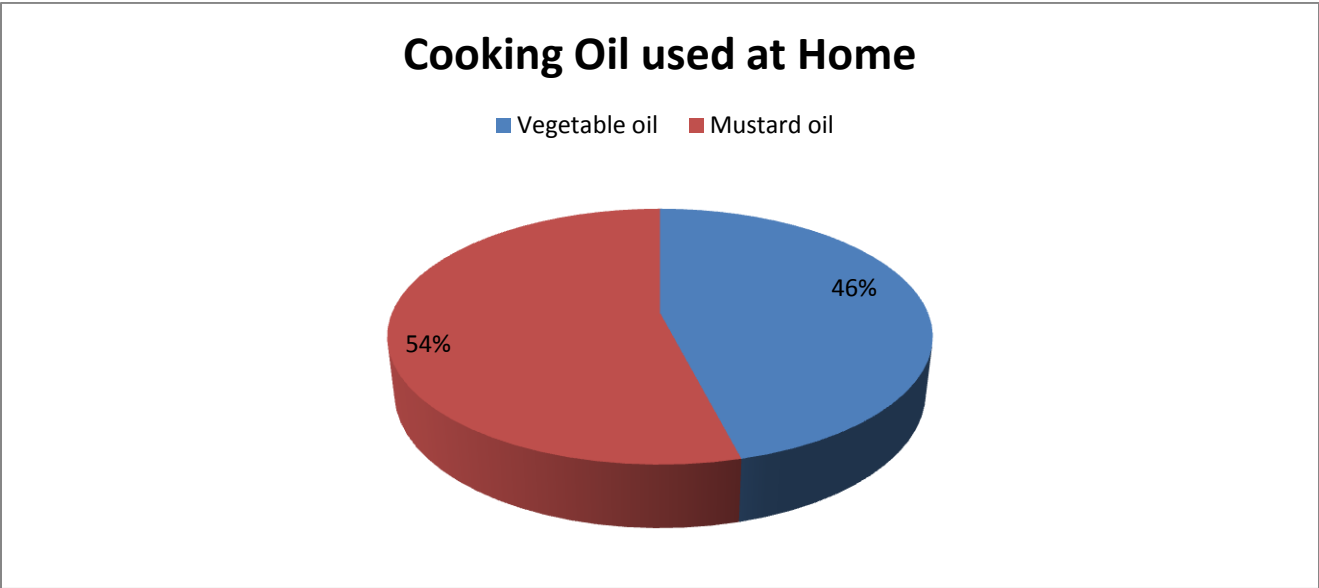


Figure No. 32 Cooking oil used at home

Fruits and vegetables-When it was asked that how frequently do they eat fruits and vegetables, around 72% of the sample population eats fruits and vegetables 1 time per day followed by 19% responded 2 times per day,4% responded 3 times per day and around 5% of the sample population did not say anything.

Dietary Supplements-When it was asked that do they take any kind of vitamin supplement or not, around 92% of the sample population do not take any kind of vitamins and only 8 % of the sample population takes vitamin capsules in different forms like vitamin C, vitamin A etc.

Diet types-When it was asked what kind of diet do they follow, around 15% respondent use low carbohydrate food, followed by 11% responded low cholesterol, 11% responded vegetarian, 2% responded weight reduction and around 64% of the sample population does not follow any kind of special diet.

Filter Water-When it was asked do they filter the water or not, that around 95% of the population filter the water for drinking and 5% respondent do not filter the water.

Eat Fast food-When it was asked do they eat fast food or not, around 73% of the sample population consumes fast food and around 27% of the sample population does not consume fast food.

How often eat fast food-When it was asked that how often do they eat fast food, around 60% of the sample population eats fast food once in a month, followed by 12% responded once in a week, 1 % responded almost every day and around 27% of the sample population do not eat fast food.

Restaurant Visit-When it was asked that how often they go to restaurant, around 72% of the sample population used to go restaurant once in a month followed by 19% responded once in a week and 9% responded they never go to the restaurant.

Why eat out-When it was asked that what influences them to eat out mostly, around 59% of the sample population responded that they eat out because they find it better than anything at home, followed by 27% responded they used to do with their friends like eating golgappa, chat etc., 2 % responded how healthy the food is, 2% responded their parents don't cook much and 10% respondent said that they don't eat out.

Preferred Types of Drinks-When it was asked do they drink juice, diet soda, energy drink, around 74% of the sample population prefer juice followed by 10% energy drink, 8% diet soda and 8% responded that they do not drink these items. When it was asked do they take soft drink, around 34% of the sample population take soft drinks once in a week, followed by 18% responded once in

a day, 10% responded more than once in a week, 4% responded every day and 34% of the sample population responded that they do not take soft drink.

Beverages you drink often-When it was asked what kind of beverage they drink, around 77% of the sample population takes tea followed by 21% responded coffee and 2% responded energy drink. When it was asked that how often do they drink tea or coffee, around 71% of the sample population takes tea and coffee for 2-3 times, on the other hand 27% respondent takes 4-5 times and 2% respondent do not take tea and coffee. When it was asked about the reason behind taking energy drink, around 37% of the sample population takes energy drink for concentration followed by 18% responded need energy, 14% responded to stay awake and 31% of the sample population do not take energy drink.

Decision on Food-When it was asked that what influences them to purchase any snacks, around 42% of the sample population responded how healthy it is followed by 34% responded cost of the food, 23% responded the taste of the food and 1% responded the calorie of the food.

Favorite Snacks-When it was asked what do they take mostly in snacks ,around 46% of the sample population takes baked food in snack, followed by 44% responded golgappa and samosa and around 10% responded chocolate and fruits.

Eating when not hungry-When it was asked do they eat when even they do not feel hungry, that around 79% of the sample population responded that they even eat when they are not really hungry and 21% responded they do not eat. When it was asked about the reason behind overeat, around 54% of the sample population responded that they eat because it fun to eat, around 25% responded that they do it because of stress and 21% do not eat when they don't feel hungry.

Sugar Consumption-When it was asked that how much teaspoons of sugar they add to the beverages, around 53% of the sample population take two teaspoons of sugar followed by 43% responded one and only 45 responded three.

Cooking oil used at home-When it was asked that what kind of fat do they prefer for baking, around 54% of the sample population use mustard oil for making food and around 46% of the sample population use vegetable oil for making food.

4.3 Exercise and Physical activity

Physical activity or exercise can improve your health and reduce the risk of increasing several diseases like diabetes, cancer, and cardiovascular disease. Physical activity and exercise can have instant and long-term health advantage.

Table No.4 Exercise and Physical Activity

Physical Activity	Walking & jogging (67)	Aerobic (4)	Bicycling (1)	None (28)	
Frequency of Physical activity	Almost Every day (37)	1-3 times a Week(23)	Two-three Times in a Month(12)	Never(28)	
How much Active Physically	More Active(64)	Less active (36)			
Exercising for Health/Fitness	Yes(74)	No(26)			
Exercising to lose weight	Yes(48)	No(52)			
Games You Play	Indoor Games(17)	Outdoor Games(6)	Don't play (77)		
Time spent in Games & sports	1-3 hours (23)	None(77)			
Exercise/Sports Helps in good Health	Yes(83)	No(17)			

Physical Activity-When it was asked what kind of physical exercise do they do, around 67% of the sample population are practicing walking, jogging, around 4% are involved in aerobic, around 1% involved in bicycling and 28% of the sample population are not involved in any kind of physical activity. When it was asked that how often do they do physical activity, around 37% of the sample population have been practicing physical activity almost every day, around 23% have been doing physical activity 1-3 times a week, around 12% of the sample population have been doing physical activity two-three times in a month and 37% have not been involved in any kind of physical activity. When it was asked to the respondent about their physical condition, around 64% responded that they are physically more active and around 36% responded that they physically less active.

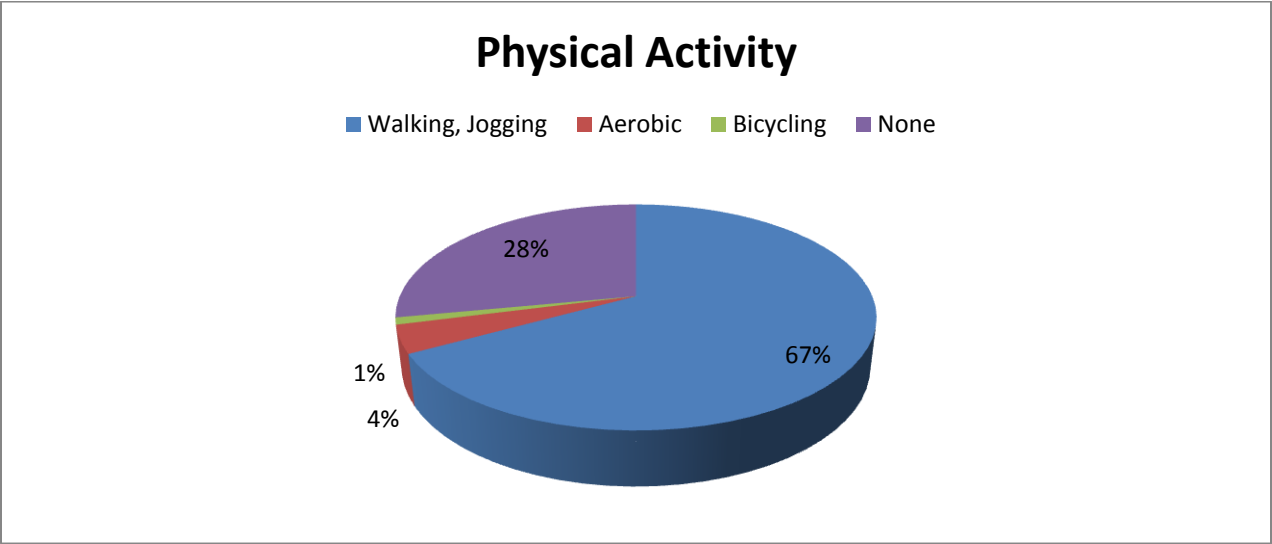


Figure No. 33 Physical Activity

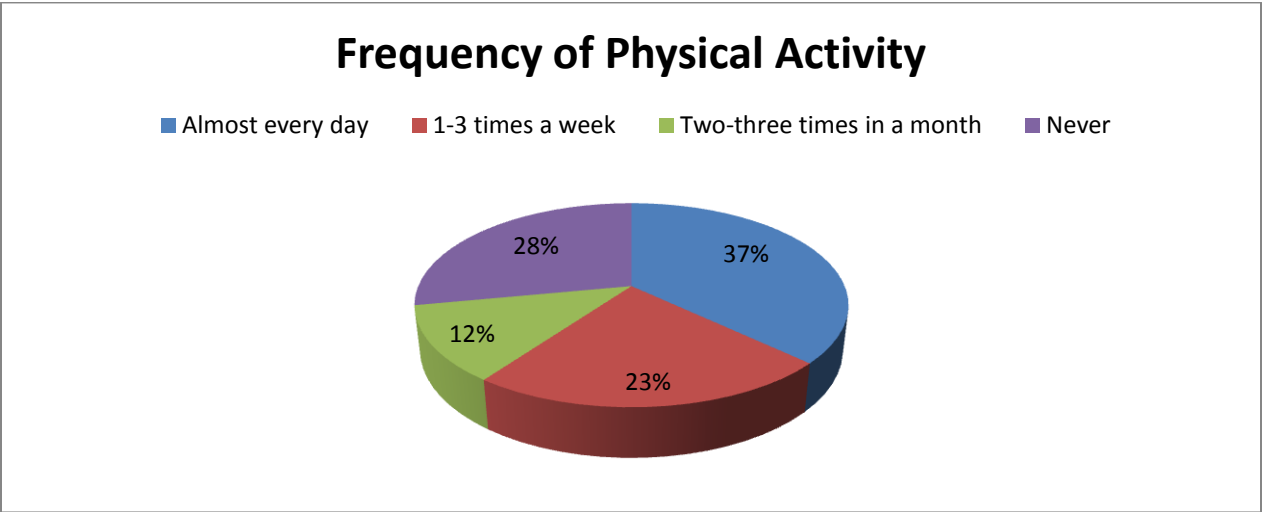


Figure No. 34 Frequency of Physical Activity

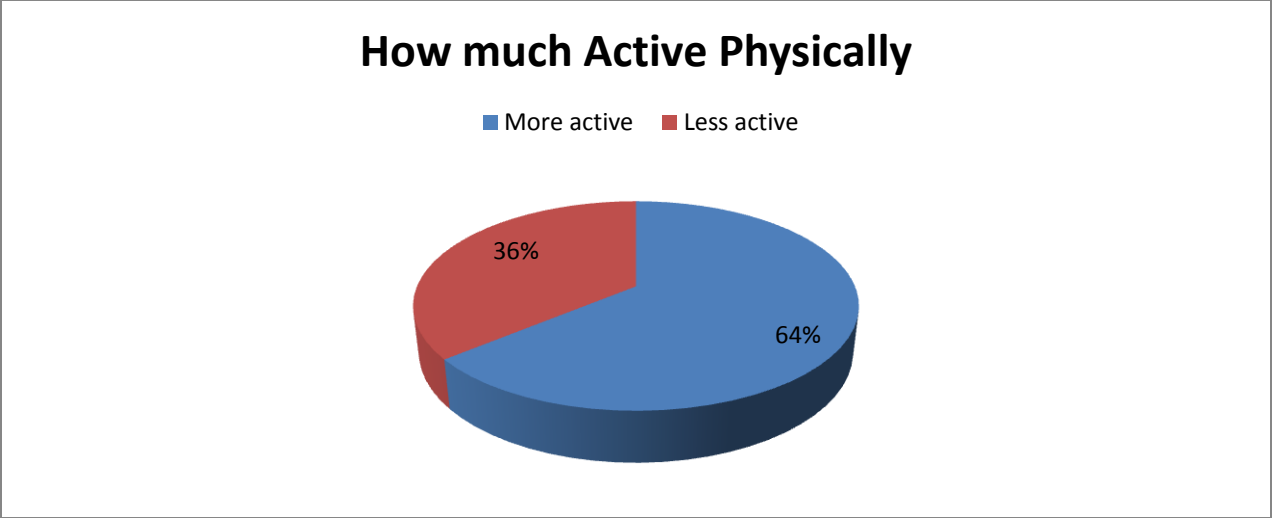


Figure No. 35 How much active physically

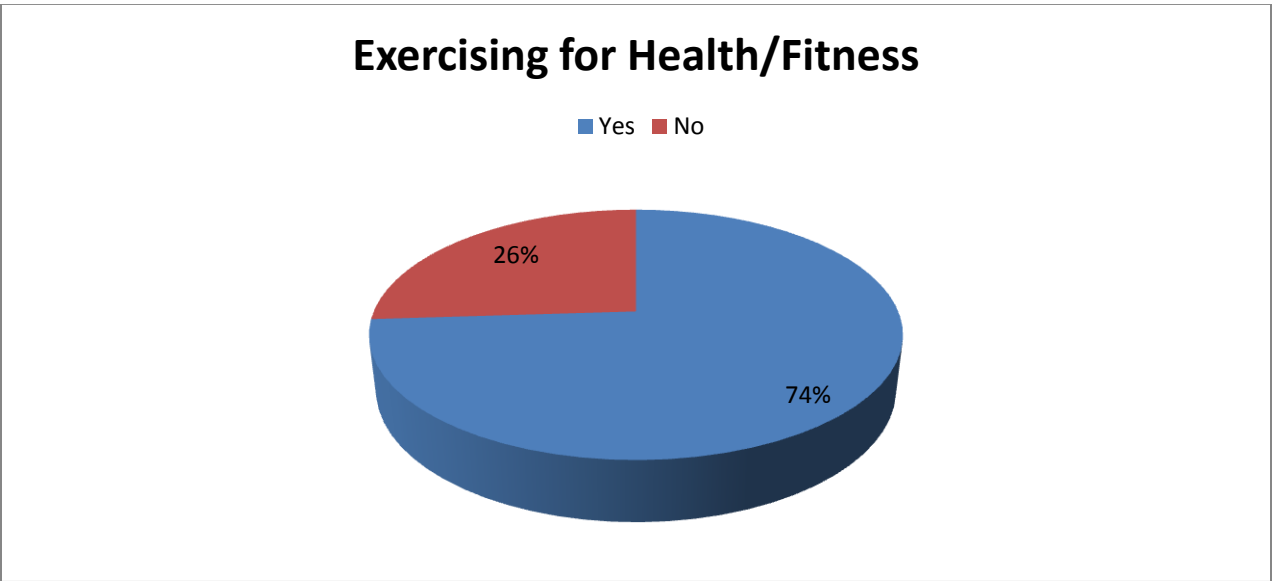


Figure No. 36 Exercising for Health/Fitness



Figure No. 37 Exercising to lose weight



Figure No. 38 Games you play

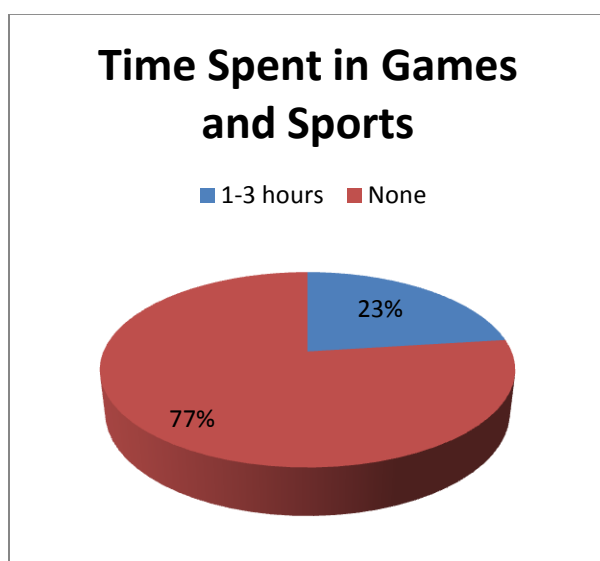


Figure No. 39 Time spent in games & sports

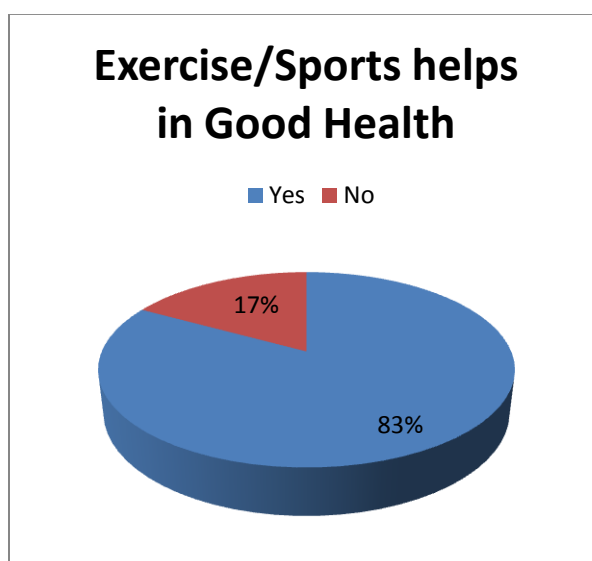


Figure No. 40 Exercise/sports good health

Exercising for health/fitness-When it was asked that do they exercise for health/fitness reason or not, around 74% respondents are doing physical activity to stay healthy and around 26% responded that they don't do exercise for health/fitness reason.

Exercise to lose weight-When it was asked that do they do physical exercise to lose weight or not, around 48% responded practices physical exercise to lose weight while 52% responded that they don't practices physical exercise to lose weight.

Games you play-When it was asked that what kind of games do they play, around 77% of the sample population don't play games as they don't get time, around 17% of the sample population do play indoor games like carom and ludo etc with their family members and 6% of the sample population are involved in outdoor games like badminton to maintain a healthy life. When it was asked that how much time do they spend in sports related activities , around 23%% responded that they play games for 1-3 hours and around 77% are not involved in games activities. When it was asked that do they find exercise and games helps in keeping good health, around 83% respondent agree that exercise and games keeps us healthy and around 17% responded did not find that exercise and games helps them to stay healthy.

4.4 Effective Use of Leisure Time

Every individual whether a student, an employee, or a businessman ideally finds some spare time in a day. In most instances we like to spend our free time with friends and families, some of us choose to play, reading Newspaper, Books, or watching TV. Making the right utilize of the time can not only be interesting but also be very fulfilling like playing games, gardening, and helps in maintaining good health.

Table No.5 Use of Leisure Time

Leisure time use	Watching TV(61)	Reading books, Newspaper(38)	Playing Sports(1)
Sharing household work	Cooking (26)	Marketing (52)	Gardening (22)
Spending time with family	Less than 4 hours (5)	4 hours(35)	6-8 hours (60)
Going for a vacation	Yes(88)	No(12)	
Frequency of vacation	Once in a Year(88)	None(12)	
Outing on holidays & Holidays	Yes(83)	No(17)	
Visiting neighbours And relatives	Yes(95)	No(5)	

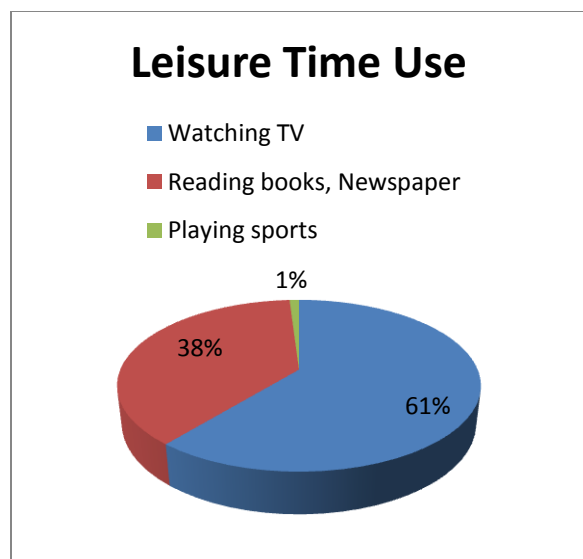


Figure No. 41 Leisure time use

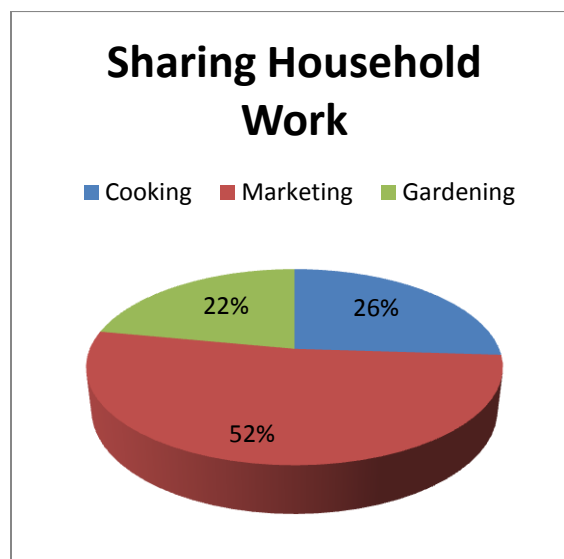


Figure No. 42 Sharing household work

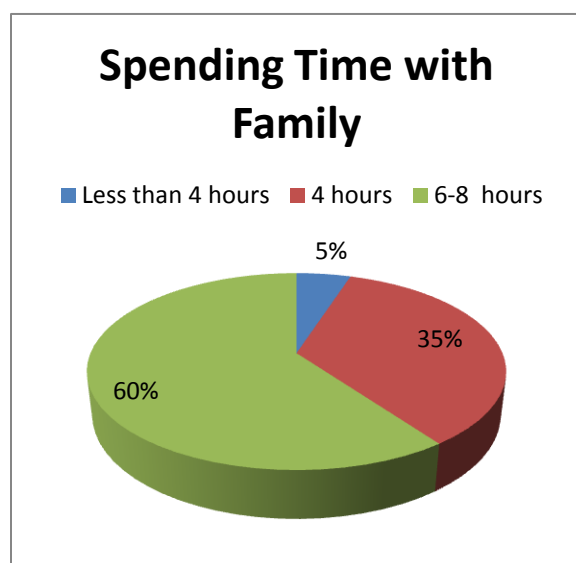


Figure No. 43 Spending time with family

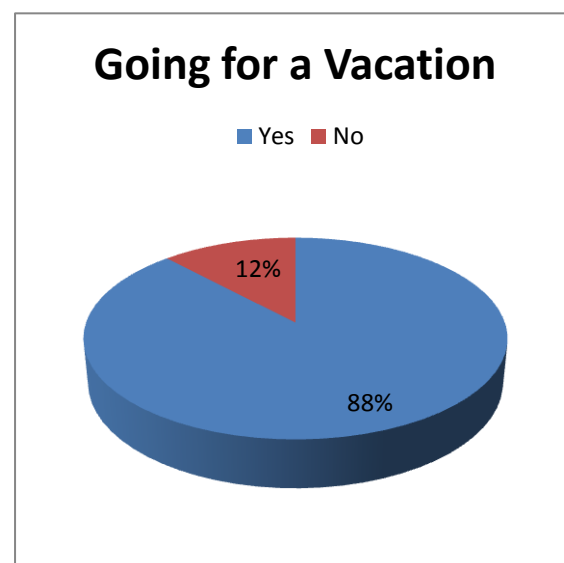


Figure No. 44 Going for a vacation

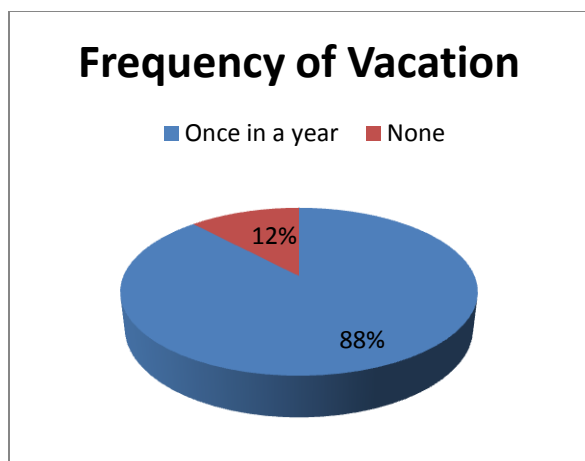


Figure No. 45 Frequency of vacation

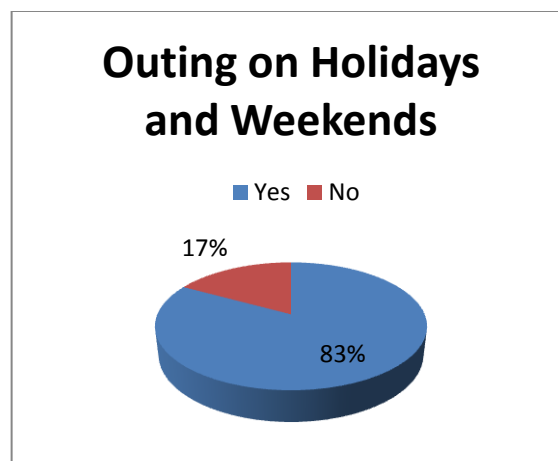


Figure No. 46 Outing on holidays

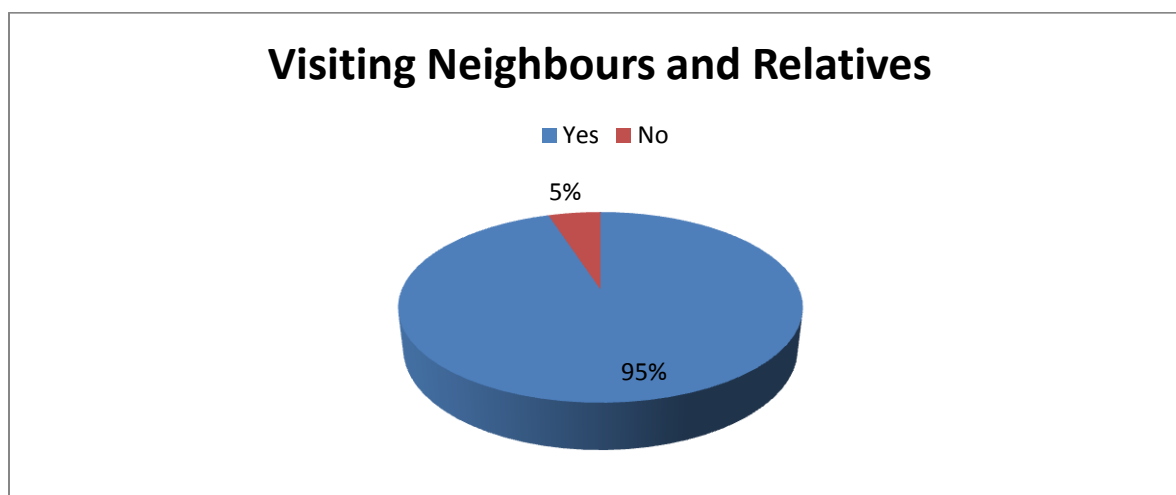


Figure No. 47 Visiting neighbors and relatives

Leisure time use-When it was asked what do they prefer to do in the leisure time, around 61% of the sample population like to spend their leisure time in reading books and newspaper, around 38% responded that they like to do watch TV and only 1% responded playing sports.

Sharing household work -When it was asked what kind of household work they do, around 52% responded that they do marketing, around 26% responded that they do gardening and around 22% responded that they do cook.

Spending time with family-When it was asked how much time they spend with their family, around 60% responded that they spend 6-8 hours with their family, around 35% responded 4 hours followed by 5% responded less than 4 hours.

Going for a vacation-When it was asked whether they go for vacation or not, 88% of the sample population responded that they go for vacation while 12% responded that they don't get time to go for vacation. When it was asked how frequently they go for vacation, around 88% respondent go for vacation once in a year while 12% don't go for vacation.

Outing on holidays & weekends-When it was asked whether they go for outing on holiday and weekends, around 83% responded that they go for outing on holiday and weekends while 17% responded that they don't go for outing.

Visiting neighbor and relatives- When it was asked whether they visit their neighbor and relatives, around 95% used to visit their neighbor and relatives and around 5% responded that they don't visit as their family lives far in another state.

4.5 Health Condition

Every day *habits* can make a huge difference in our capability to live healthy life. The lack of physical activity, poor diet, sleepiness is associated with poorer health. Physical inactivity is a major cause for being obese, underweight, and overweight.

Table No. 6 Health Condition

Perceived body image	Under-Weight(1)	Overweight (21)	Normal (77)	Obese(1)
Want better shape	Yes(63)	No(37)		
Doing something to improve health	Yes(51)	No(49)		
Health improving methods adopted	Jogging(44))	Dieting on My own(7)	None(49)	
Difficulties in getting shape	Lack of Energy(28)	My busy Schedule(44)	None(28)	
Duration of sleep	Less than 4 Hours(2)	3-4 hours(5)	6-8 hours(74)	More than 8 hours(19)
Sleep problem	Yes(15)	No(85)		
Use of sleeping pills	1-2 times Per month (9)	Never(91)		

Results of sleepiness	Poor work Performance (34)	Fatigue(38)	None(28)	
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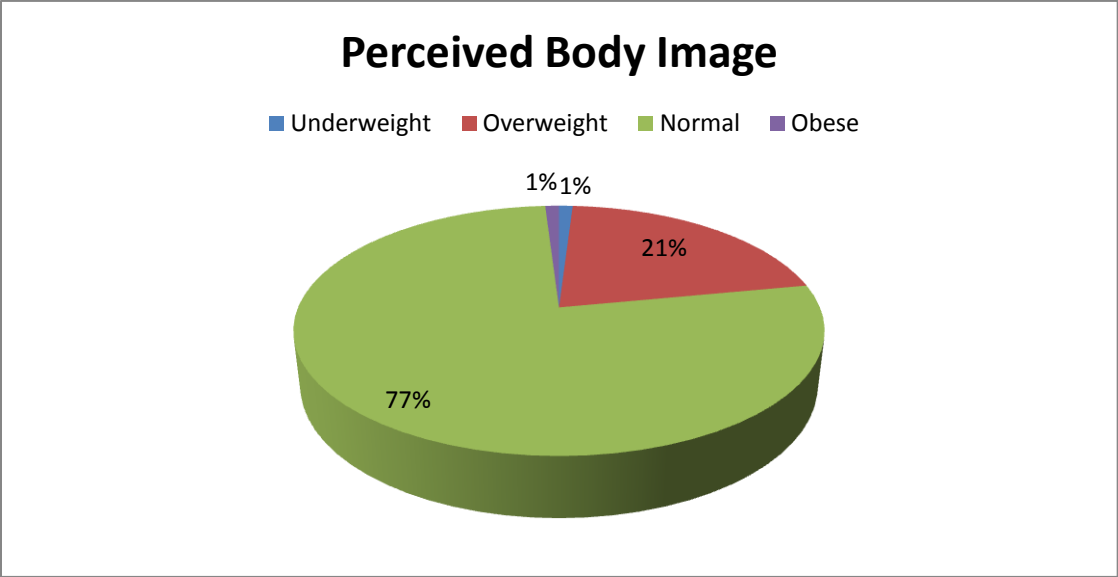


Figure No. 48 Perceived body image

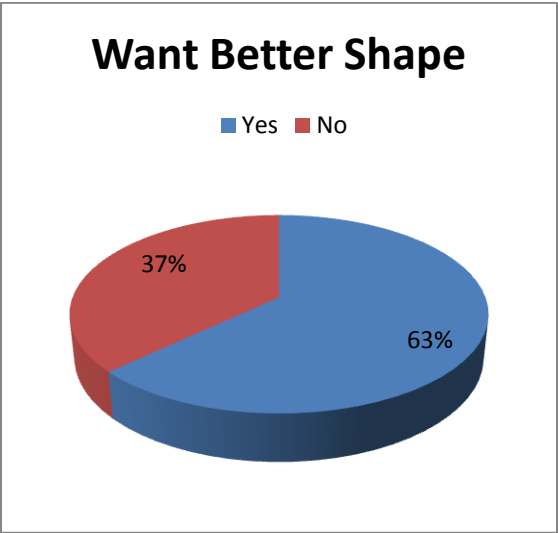


Figure No. 49 Want better shape



Figure No. 50 Health Improvement

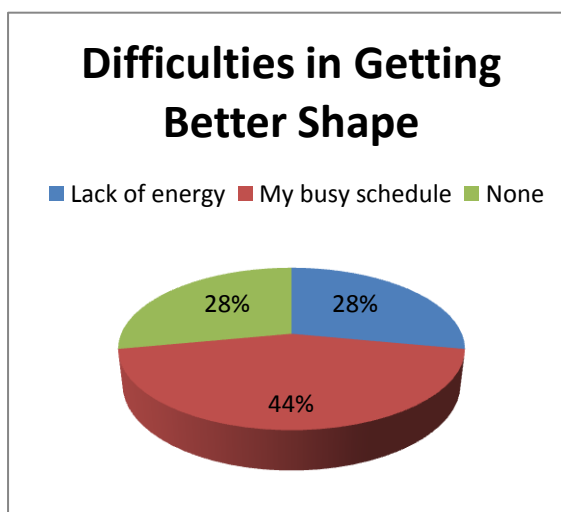
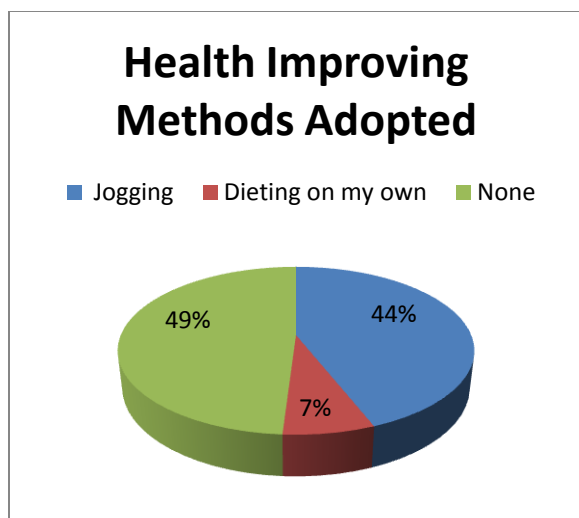


Figure No. 51 Health improving methods adopted Figure No. 52 Difficulties in getting better shape

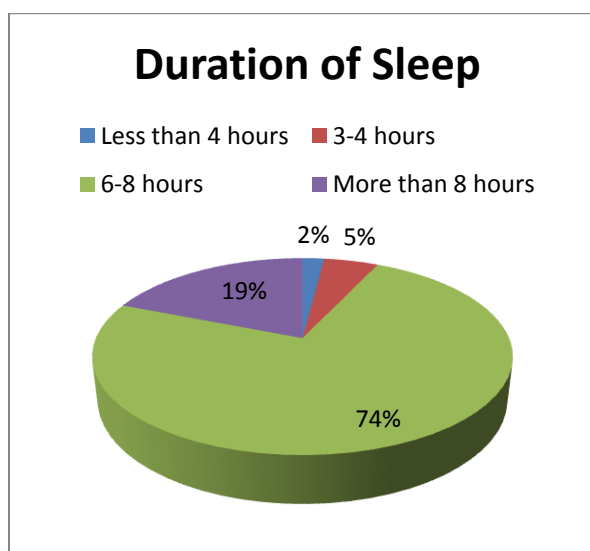


Figure No. 53 Duration of sleep

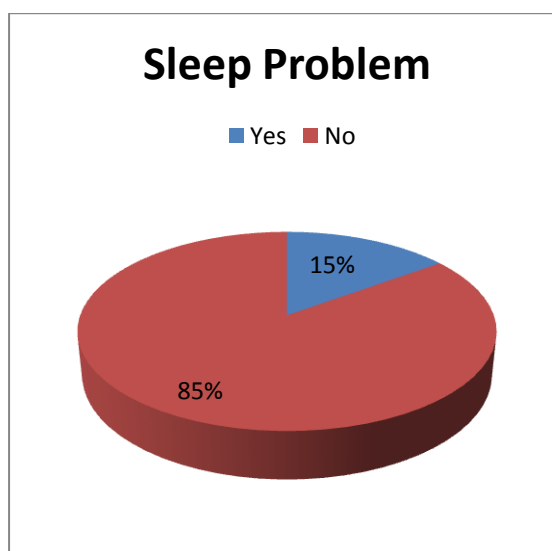


Figure No. 54 Sleep problem

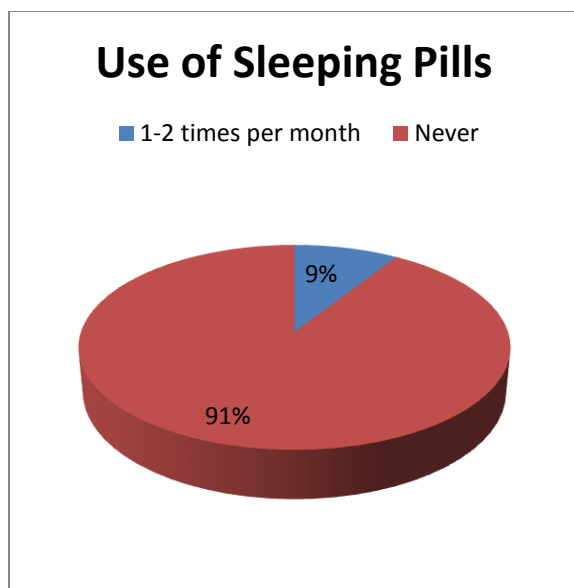


Figure No. 55 Use of sleeping pills

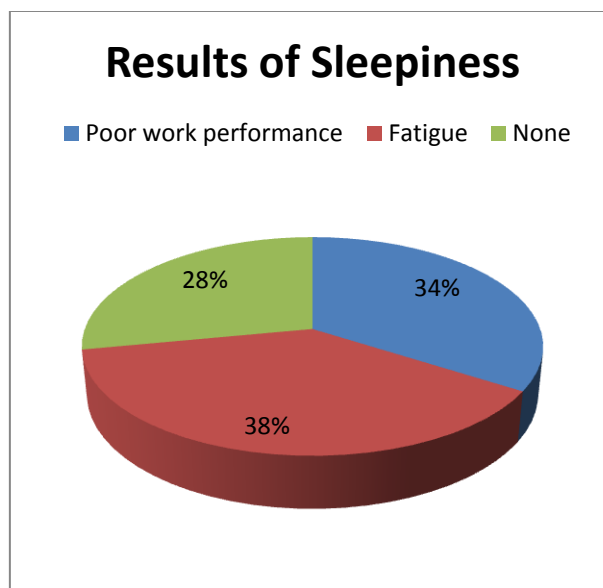


Figure No. 56 Results of sleepiness

Perceived body image-When it was asked to the respondent what do they think about their health condition, around 77% responded normal, 21% responded overweight, 1% responded underweight and 1% responded obese.

Want better shape-When it was asked do they want to get in better shape, around 63% responded that they want to get in better shape and 37% respondent are happy with their physical appearance. When it was asked that what is holding them to get in better shape, around 44% responded that they do want to get in better shape, but their busy schedule is holding them back, 28% responded lack of energy while 28% responded are not doing anything to get in better shape.

Doing something to improve health-When it was asked that whether they do something to improve health or not, around 51% people are doing some physical activity to improve their health while 49% are not involved in any kind of physical activity. When it was asked that what kind of physical activity they do to improve health, 44% responded that they are doing more cardio exercise like running, jogging, 7% responded that they are doing dieting and 49% are not involved in physical activity.

Sleep-When it was asked how much time do they sleep, around 74% respondent sleeps for 6-8 hours, 19% respondent sleeps for more than 8 hours, 5% respondent sleeps for 3-4 hours

followed by 2% less than 4 hours. When it was asked that whether do they have sleeping problem or not, around 85% responded does not have any kind of sleeping problem and 15% responded are suffering from sleeping problem. When it was asked that how frequently they take medicine to fall asleep, around 91% respondent don't take any kind of medicine to fall asleep and 9% respondent used to take medicines sometimes. When it was asked that did they face any kind of problem because of sleepiness, around 38% respondent said fatigue followed by 34% responded poor work performance and 28% responded have not faced any kind of problem due to sleepiness.

Significant Finding

Table No.7 BMI CODE AND RESULT

4	3	2	1
Obese (Average Age)	Overweight (Average Age)	Normal (Average Age)	Underweight (Average Age)
4 (44.25)	17 (44.64)	76 (46.82)	3 (45.6)

The weight and height of the participants were used to calculate the BMI (Body Mass Index). One of the questions in this section was on their perceived body image. The correlation between actual BMI and perceived body image was found to be 0.20. Such a low correlation suggests a denial of the participants about their health risks and vulnerabilities for future lifestyle diseases. Hence, there is a need to educate the respondents about their health conditions, some obese individuals don't realize they have a weight problem and that could be an unhealthy attitude as these same people tend not to exercise and have many risk factors for cardiovascular disease. It was also found out that all of whom were classified as obese, underweight and overweight were satisfied with their body size and didn't think they need to do something to improve their health condition.

4.6 Wrong choices and Habits

Lifestyle is the major factors leading to many diseases. Wrong habits like drug abuse, tobacco smoking and alcohol drinking as well as lack of exercise may increase the risk of developing certain diseases like cancer, High blood pressure. Everyday *habits* can make a big difference in

your ability to live healthy habits. The lack of physical inactivity, poor diet, sleepiness is associated with poorer health. Physical inactivity is a major cause for being obese, underweight, and overweight.

Table No. 8 Wrong choices and Habits

Kind of Person	Active (74)	Lazy (10)	Laborious (10)	Anxious(6)
Smoking Habit	Yes (31)	No (69)		
Tried smoking during	Teen age (13-19)(21)	Post teen age(20 and above) (10)	Never(69)	
Smoking per day	Less than 1 pack (9)	1 pack (12)	1-2 packs(10)	None(69)
Why smoke	Because my friends we were doing it(8)	Curiosity(13)	Stress and work Pressure(10)	None(69)
Consume alcohol	Regularly(3)	Occasionally(36)	Never(61)	
Use tobacco	Regularly(2)	Occasionally(21)	Never(77)	

Kind of person -When it was asked that what kind of person are they, around 74% responded that they are active, followed by 10% respondent are lazy, 10% are laborious and 6% are anxious.

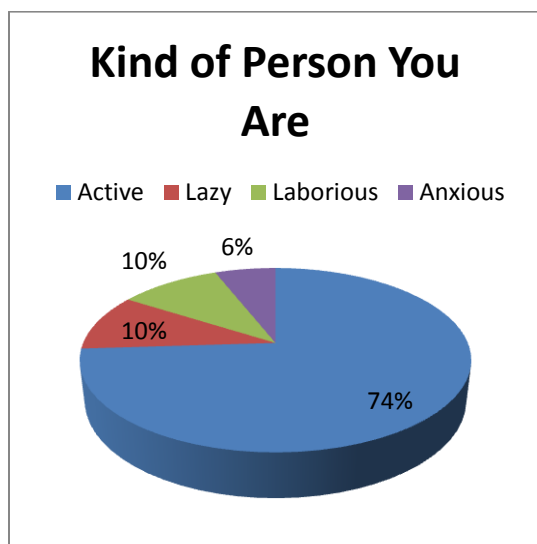


Figure No. 57 Kind of person you are

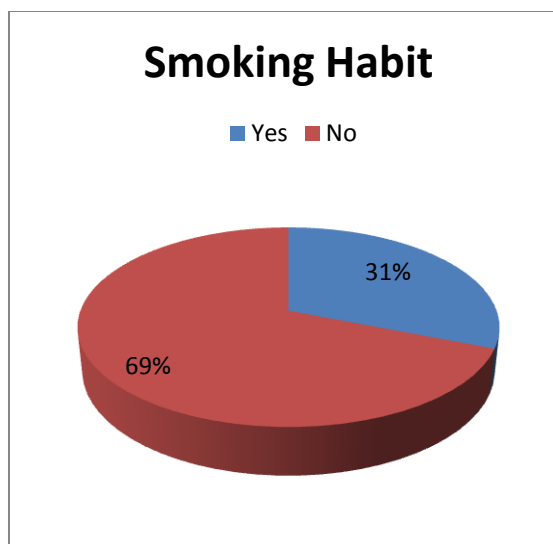


Figure No. 58 Smoking habit

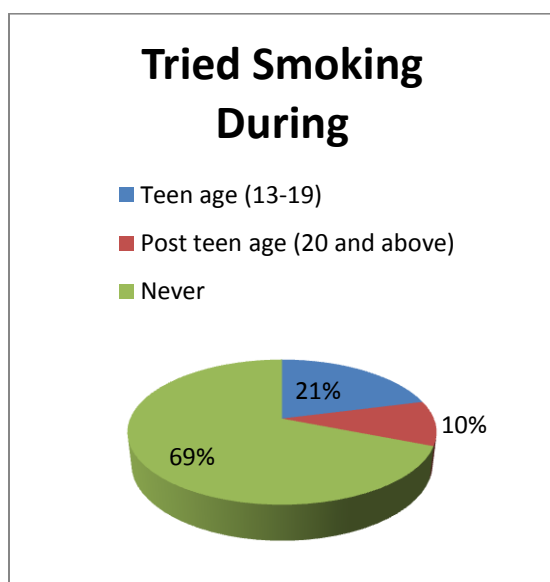


Figure no. 59 tried smoking during

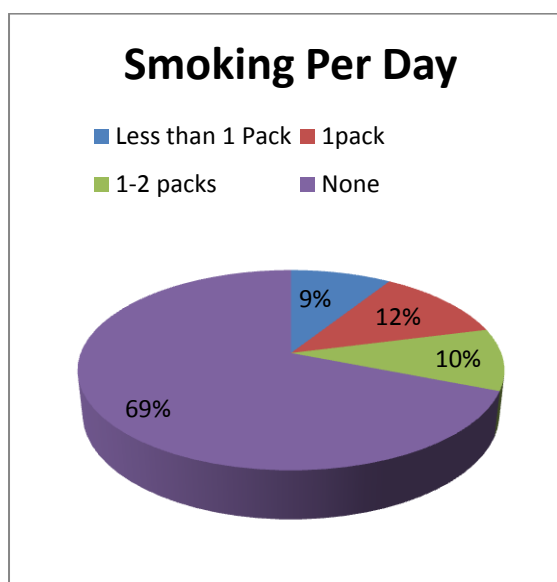


Figure No. 60 Smoking per day

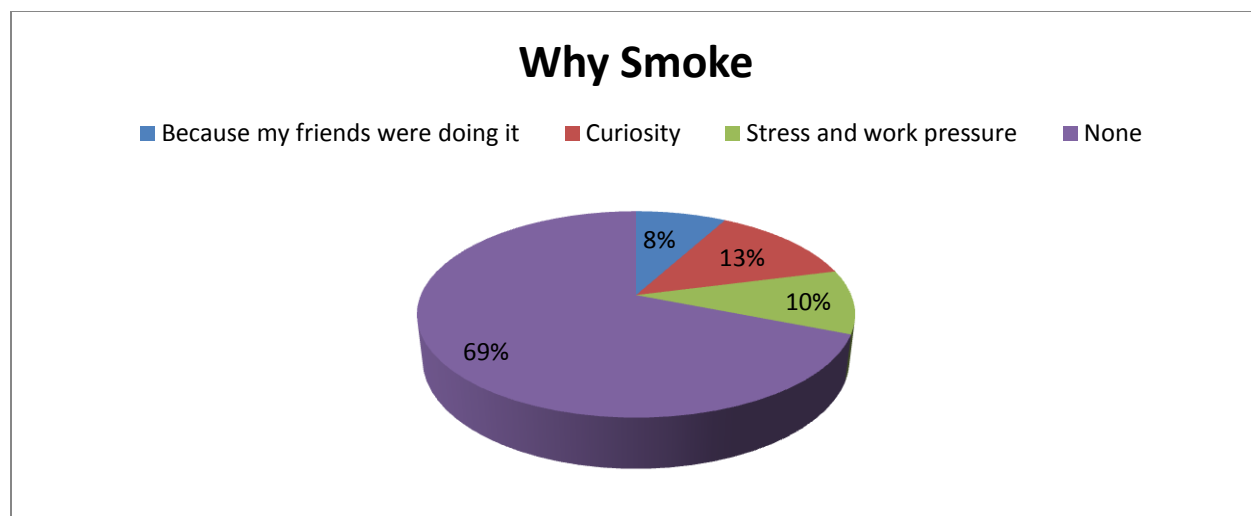


Figure No. 61 Why smoke

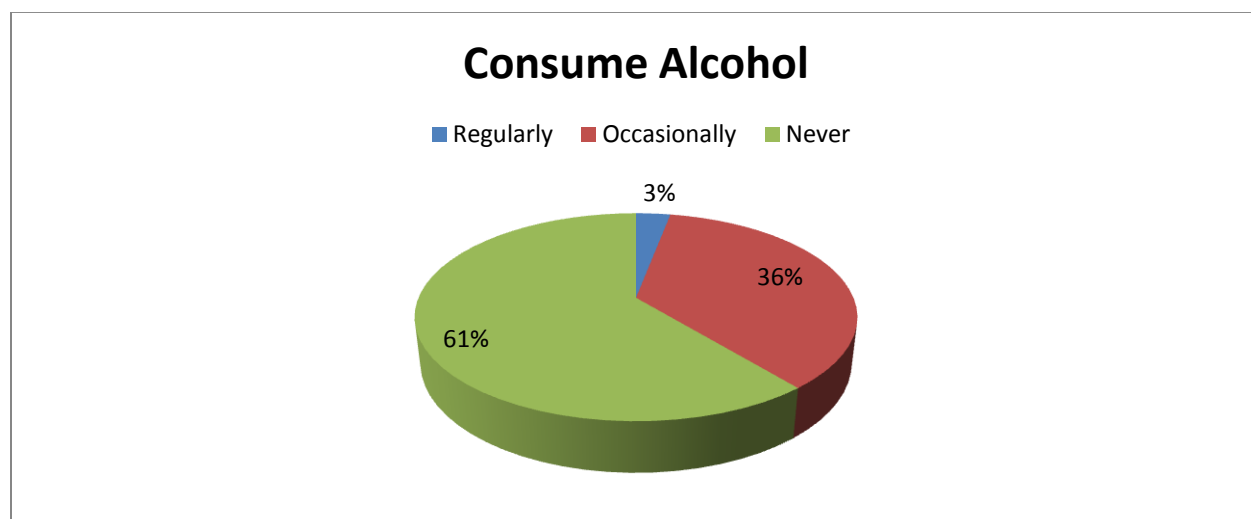


Figure No. 62 Consume alcohol

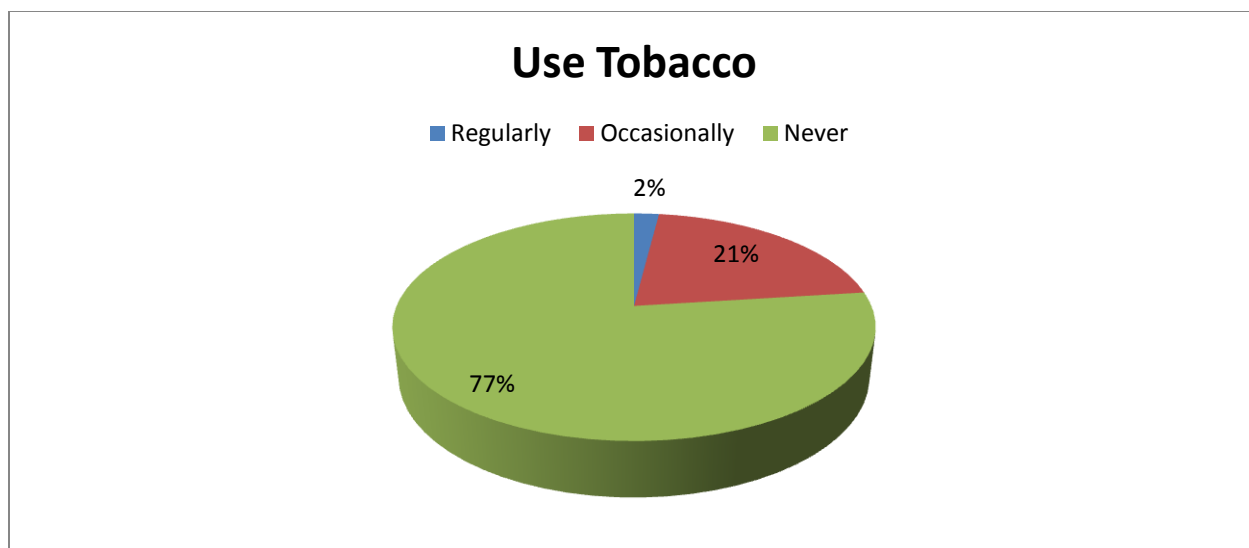


Figure No. 63 Use of Tobacco

Smoking habit-When it was asked that do they smoke or not, around 31% respondent have been smoking since long while 31% responded that they don't smoke. When it was asked that when did they start smoking, around 10% of the sample population have started smoking at the age of 20 and above while 21% of the sample population have been smoking since teen age(13-19) and rest of the 69% respondent don't smoke. When it was asked that how many packs of cigarette do they smoke per day, around 12% of the sample population used to smoke cigarette 1 pack per day, while 10% responded 1-2 pack per day followed by 9 % responded less than 1 pack. When it was asked the reason behind smoking, around 13% respondent started smoking because of curiosity, 10% responded stress and work pressure and 8 % said that they started because of friend influence.

Alcohol consumption-When it was asked that how frequently do they drink, around 36% of the sample population consumes alcohol occasionally and 3% responded regularly while 61% of the sample population never consumes alcohol.

Tobacco consumption-When it was asked that how often they consume tobacco, around 21% respondent used to consume tobacco occasionally while 2% of the sample population responded that they consume tobacco regularly and 77% of the sample population doesn't consume tobacco.

4.7 Workplace Environment

The modern lifestyle and globalization is argued to be responsible for lifestyle diseases like obesity, diabetes, hypertension, depression. People prefer to use a bike or car instead of walking for short distances also, during the field study it was found that 36% of the sample population use car, 36% prefer travelling by bike followed by 12% going by auto and 5% prefer bus.

People who work in shift may feel detached from the family and friends; they may experience difficulty arranging time and exercises. Physical wellbeing may as well experience the ill effects of shift work. It is also tough to stay alert on the job and this results in poor work performance. *Shift work and working hours may cause wide range of health problems like lack of sleep to cardiovascular diseases, diabetes and cancer. Working long hours, even at a desk, can have serious concern for the physical health like obesity.* Pollution is a main environmental health problem affecting the developing and the developed countries equally and affecting the lungs and the respiratory system, it leads to diseases like asthma, Bronchitis and many more. According to World Health Organization, Asthma has emerged as one of the major non communicable disease. Almost 235 million individuals as of now experience the ill effects of asthma. Asthma is typically prevalent among the youngster. There are various factors which cause asthma, such as airborne allergies, respiratory infections, common cold, physical activity which can cause asthma, cold air, stress and emotions which are strong, air pollutants etc. Also, while most deaths that occurs because of asthma is preventable. In the United States, more than 3000 individuals die because of asthma every. Proper diet, education among the masses, and full and dynamic lifestyle can prevent asthma.

Commuting to workplace-The modern lifestyle and globalization is argued to be to responsible for lifestyle diseases like obesity, diabetes, hypertension, depression People prefer to use a bike or car instead of walking for short distances also, when it was asked how do they go to office, 36% of the sample population use car, 36% prefer travelling by bike followed by 12% going by auto and 5% prefer bus.

Table No. 9 Workplace Environment

Commuting to Workplace	Bus(5)	Car(36)	Bike(46)	Auto(12)	
Work schedule	Day shift(94)	Evening shift(1)	Night shift(1)	Rotation(4)	
Working hour	Less than 8 Hours(14)	8 hours(67)	8-12 hours(17)	12-16 hours(2)	
Nature of job	Sitting job(74)	Moving job(26)			
Work area	Open area(19)	Closed area(81)			
Polluted work environment	Yes(43)	No(57)			
Excess use of Computer	Yes(61)	No(39)			
Computer use Per day	1 hour(9)	2 hours(39)	4 hours(21)	6 hours(10)	None(21)

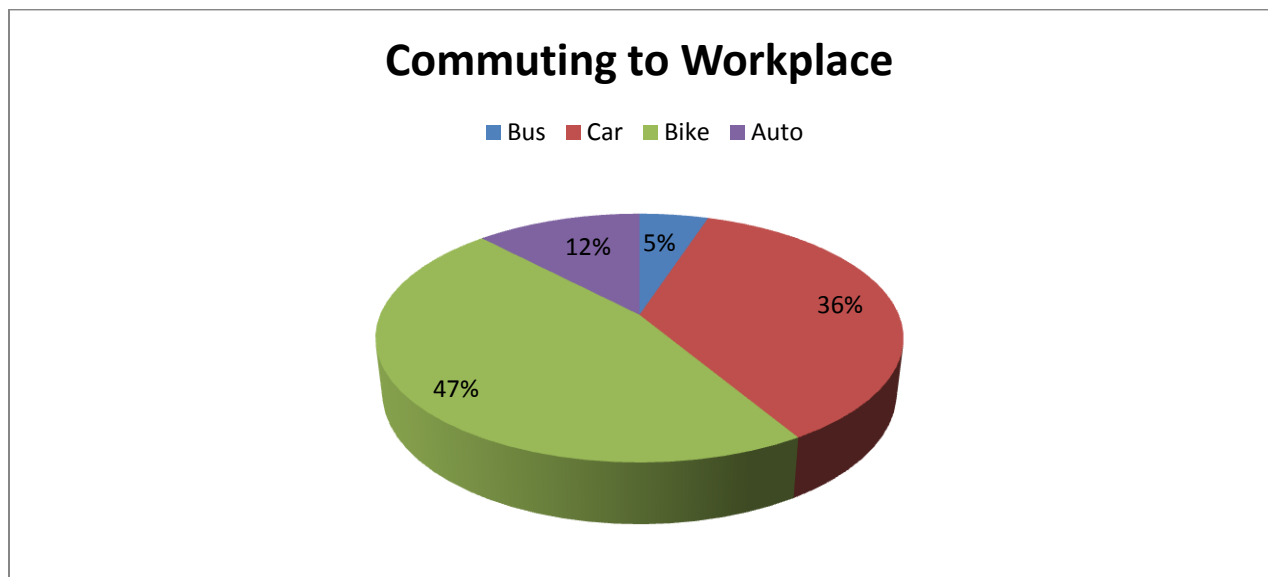


Figure No. 64 Commuting to workplace

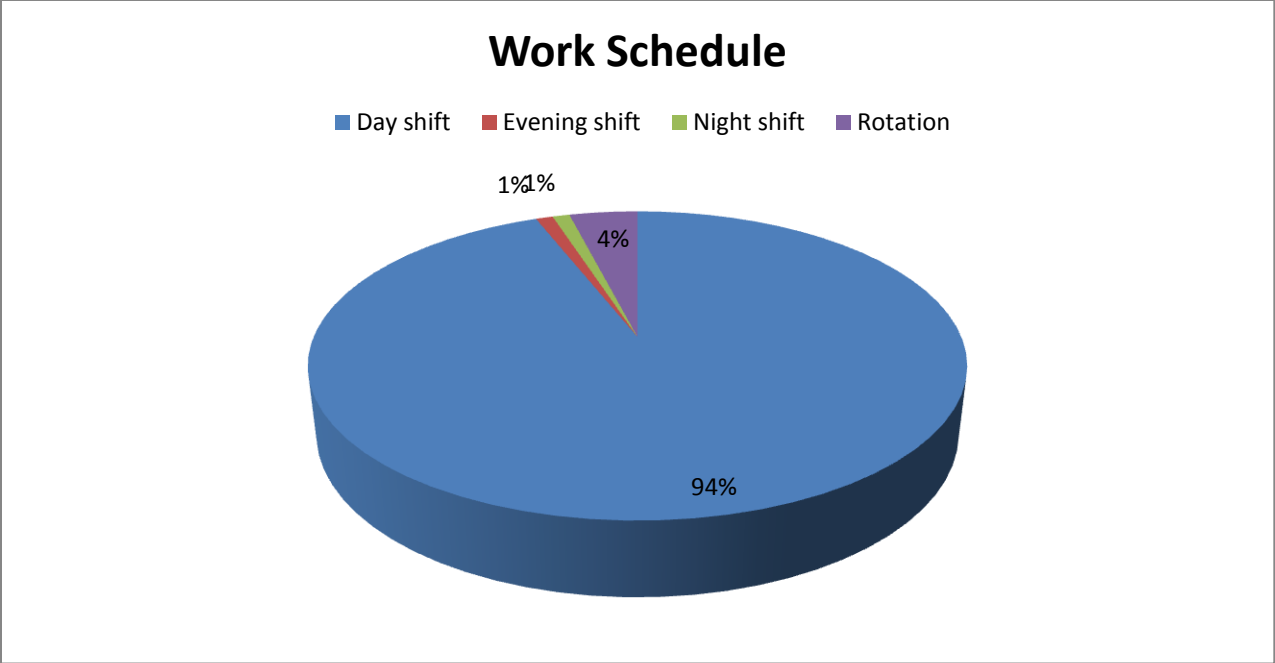


Figure No. 65 Work schedule

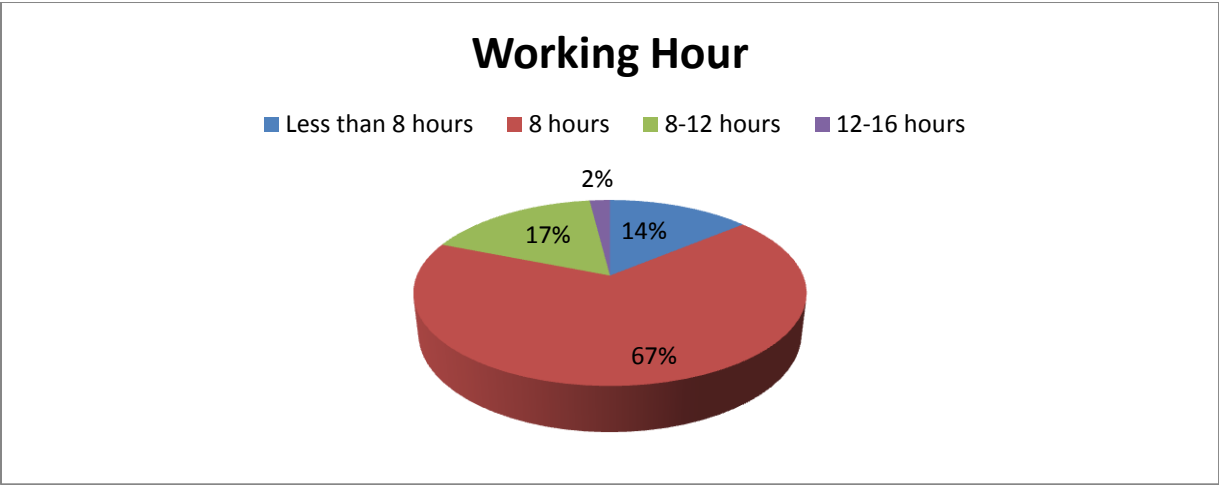


Figure No. 66 Working hour

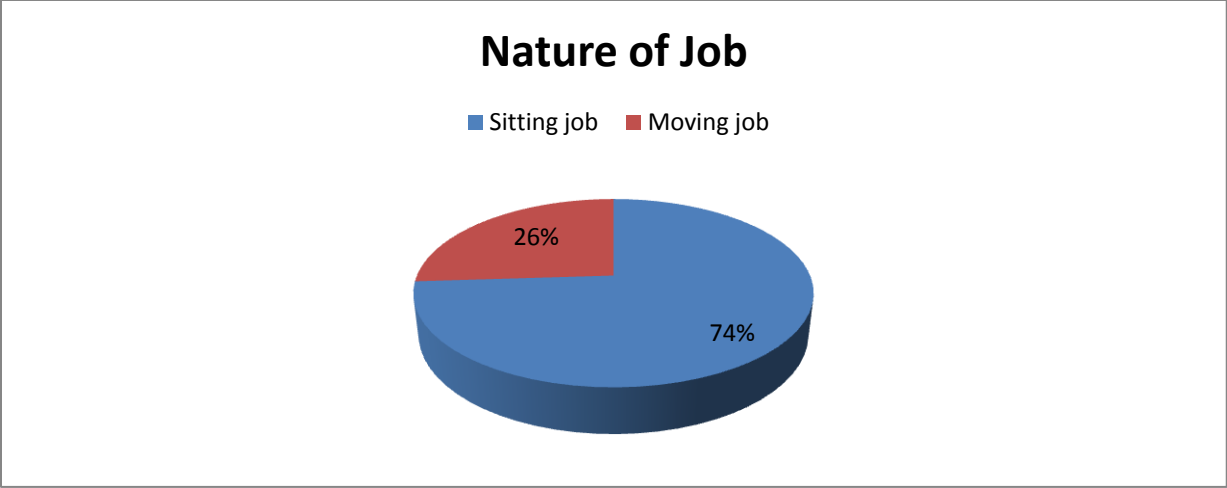


Figure No. 67 Nature of job

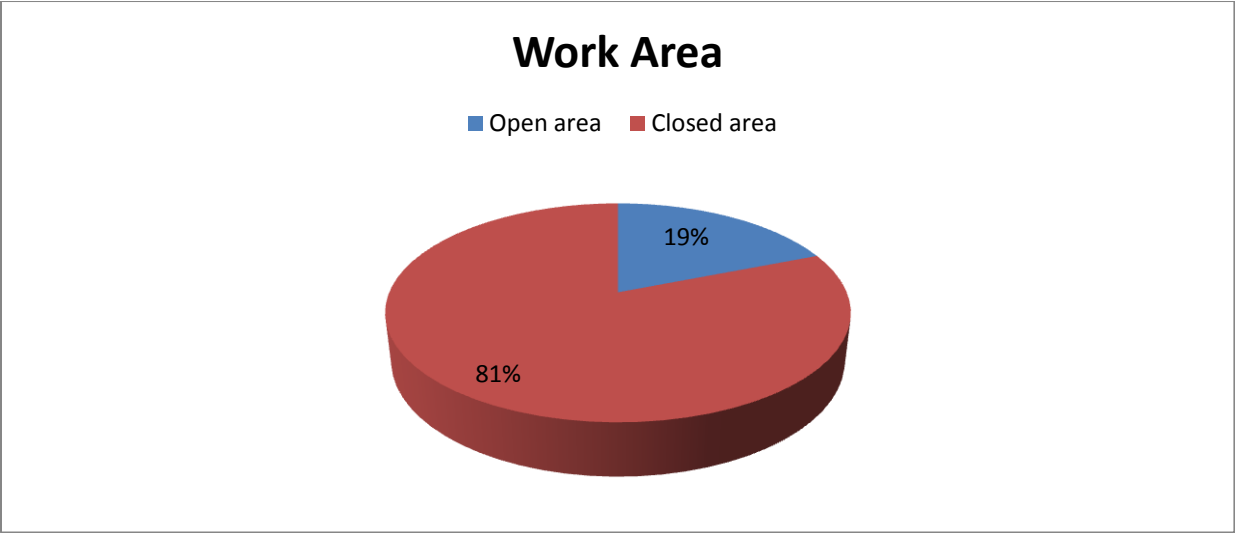


Figure No. 68 Work area

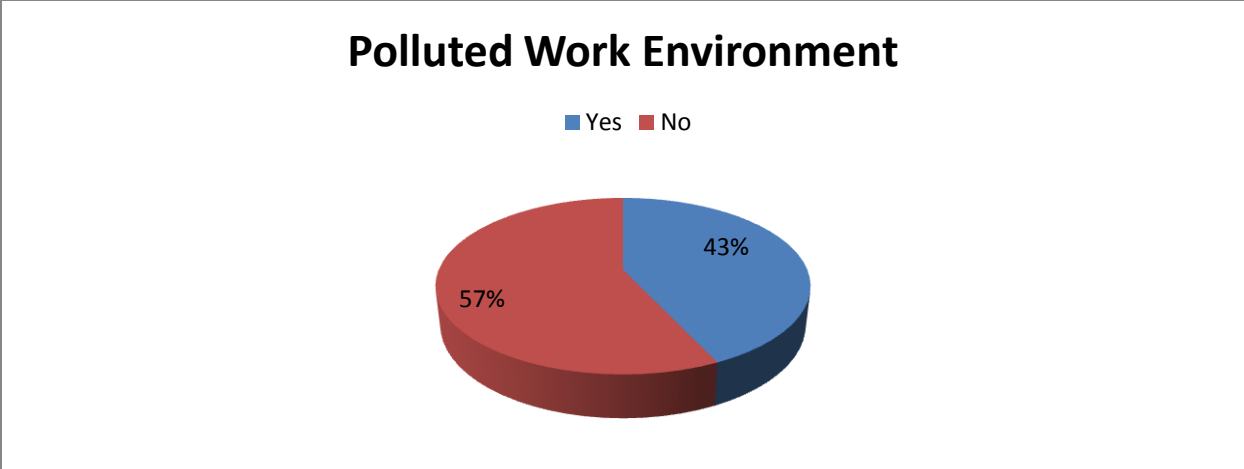


Figure No. 69 Polluted work environment

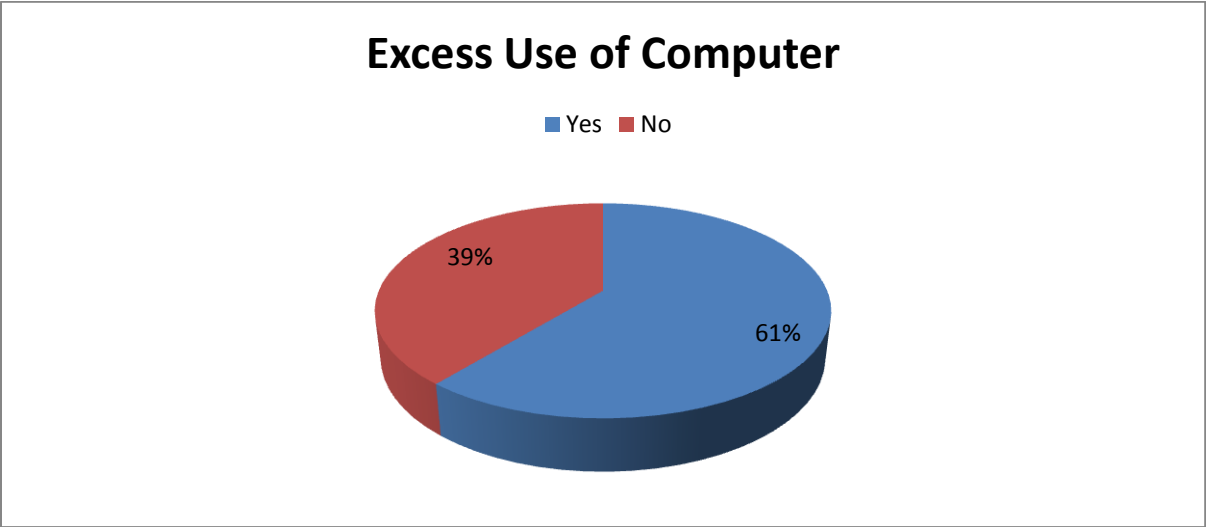


Figure No. 70 Excess use of computer

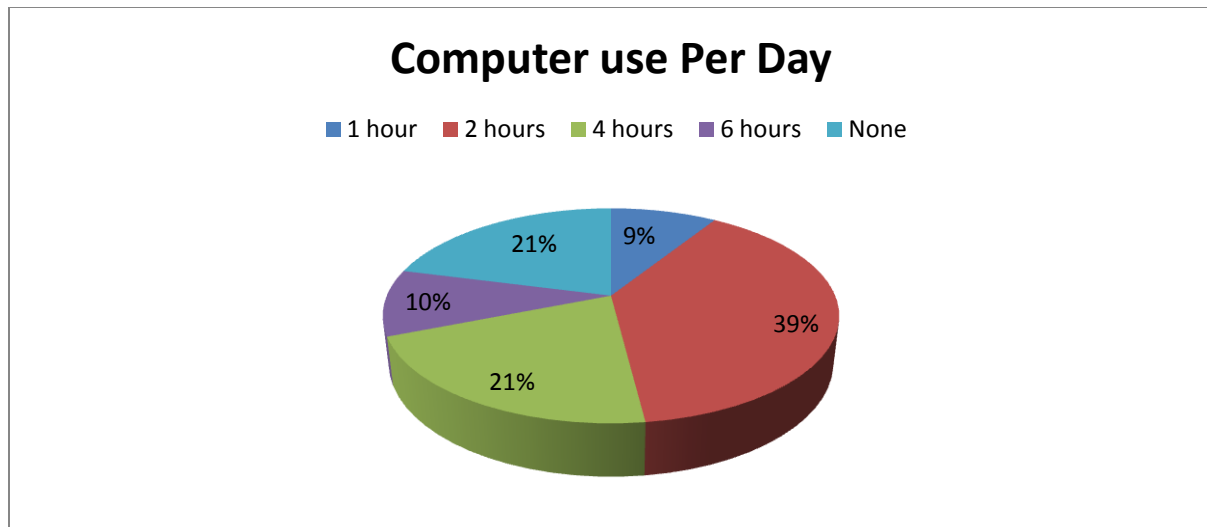


Figure No. 71 Computer use per day

Work schedule-People who work in shift may feel detached from the family and friends; they may experience difficulty arranging time for family, friends, outing and exercises. Shift work may have serious issue for physical well-being .It also tough to stay alert on the job and results poor work performance etc. When it was asked to the respondent about their work schedule, 94% sample population works in day shift, 4% responded that they work in rotation followed by 1% responded evening shift and 1% responded night shift. When it was asked about their working hours, around 67% of the sample population works for 8 hours, around 17% responded 8-12 hours, around 14% responded less than 8 hours and only 2 % people work for 12-16 hours.

Nature of job-When it was asked that whether they have sitting job or moving job, around 74% of the sample population have sitting job while 26% of the sample population responded moving job.

Work area-When it was asked whether they work in closed area or open area around 81% of the sample population works in closed area while 19% of the sample populations work in open area. When it was asked that whether they work in polluted area or clean environment, around 43% respondent works in polluted environment and 57% responded they work in clean environment rather than polluted.

Excess use of computer-When it was asked that do they work a lot with computer or not, around 61% respondent works a lot with computer while 39% respondent don't work a lot with computer. When it was asked that how much time they spend on the computer, around 39% respondent works in computer for 2 hours then comes 21% respondent works for 4 hours followed by 10% responded 6 hours, 9% responded 1 hour and 21% of the sample population don't use computer.

4.8 Lifestyle Diseases

Lifestyle diseases have become very common amongst the masses in the contemporary era. Various research studies have claimed that lifestyle diseases such as Blood Pressure, Obesity, Diabetes, Arthritis, Stress, and Asthma are increasing in frequency. A research study, which was conducted by World Health Organization, has claimed that blood pressure has brought about 7.5 million deaths, and around 12.8% of the aggregate of all deaths. For Example, Blood pressure can also trigger heart stroke along with circulatory strain. Blood pressure has the tendency to develop over many years, and it affects everyone. There are a number of causes which can result in blood pressure, too much of smoking, alcohol in taking, stress, salt in the diet, older age and lack of physical activity. Studies by WHO had also found out that man have a somewhat higher tendency of developing blood pressure compared to females.

According to DA Victoria 2002, around 7.4% of the populations of Australia who are aged above 25 years have diabetes. There is a greater chance of developing diabetes when there is a high content of glucose in the blood. The content of glucose increases when there is more intake of food that contains carbohydrates such as potatoes, bread, milk, bread, etc. When there is high level of glucose in the blood level, it can damage parts of the body over time. The risk of developing blood pressure increases with age.

Stress is caused when everything around the people becomes excessive and when the schedule is overburdened (Medical News Today, 2014). Anything that gives rise to challenges or pose risk to prosperity and wellbeing is a stress. There are number of hassles which people face from day to day life which may result in stress. When people suffer from stress number of side effects and health problems can happen, such as problem in breathing, the problem in digestion slows down, heart rate (pulse) rises, the muscle becomes tenser and there is sleepless night. Creating systems

to manage stress can forestall or lessen its belongings. There are numerous ways to deal with stress; this includes incorporating physical activity, changes in the eating habits, taking up of different stress management courses.

Table No. 10 Lifestyle Diseases

Presence of lifestyle diseases	Heart disease(4)	Hypertension (30)	Asthma (14)	Diabetes (18)	No Disease(34)
Lifestyle disease Diagnosed	10 years back (24)	5 years back (42)	None (34)		
Disease affect daily Performance	Sometimes(48)	Rarely(18)	Never(34)		
Under regular Treatment	Yes(44)	No(22)			
Frequency of visiting A doctor	Once in a Week(2)	Once in a Month(38)	Once in a Year(26)		
Frequency of illness	Sometimes(23)	Quite often (12)	Don't Know(65)		
Presence of mental illness	No(88)	Don't know (12)			

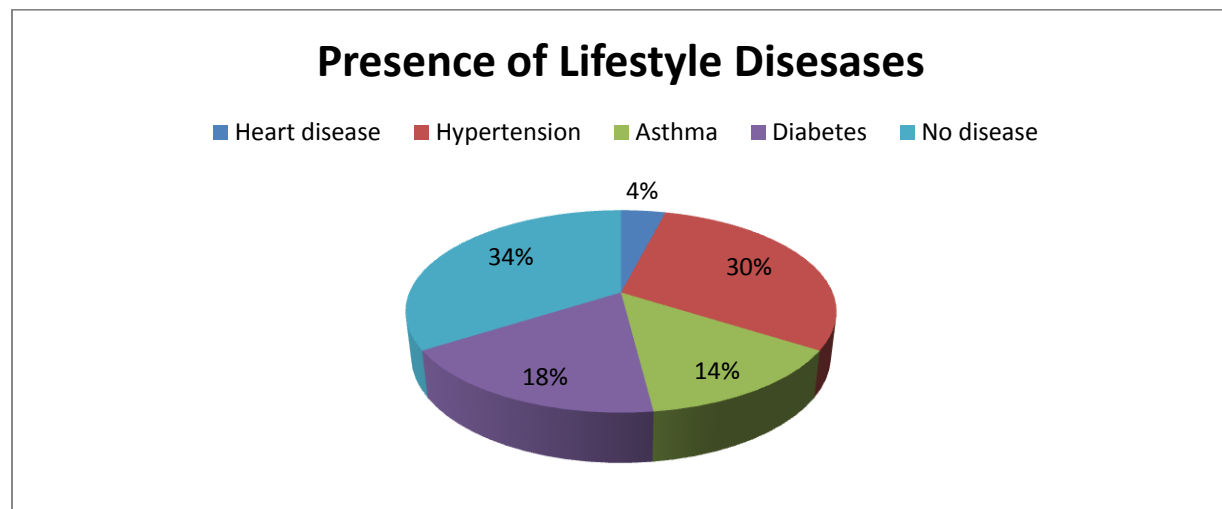


Figure No. 72 Presence of lifestyle diseases

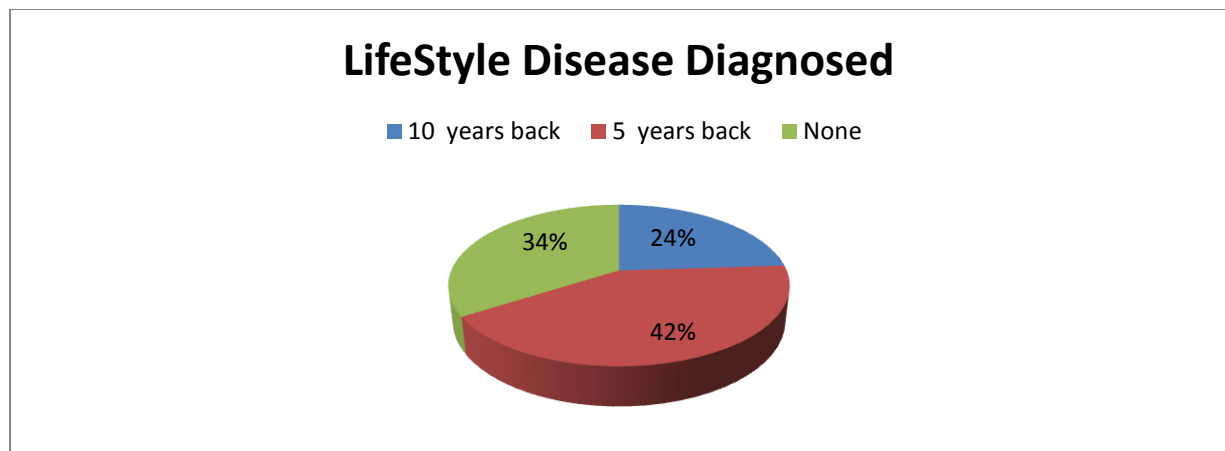


Figure No. 73 Lifestyle disease diagnosed

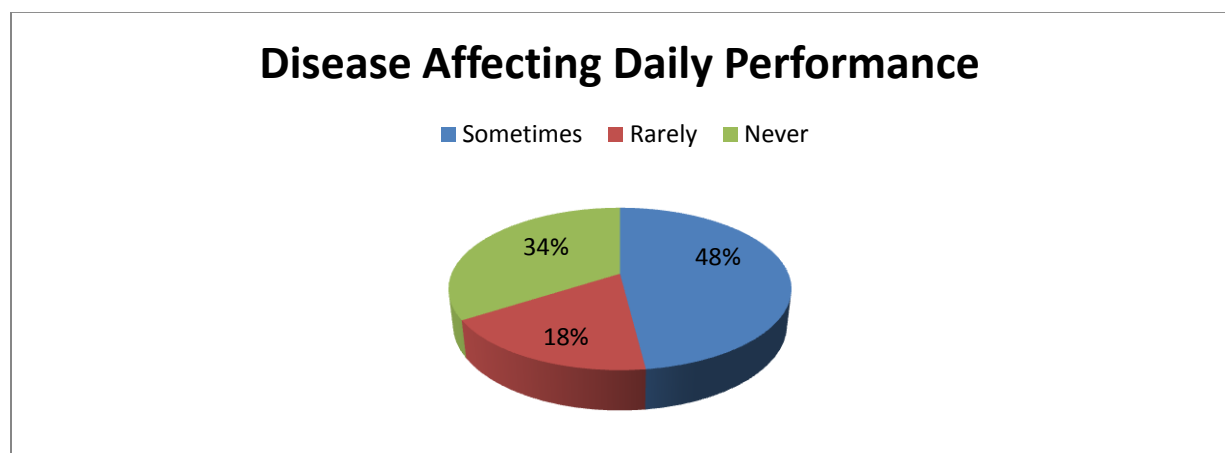


Figure No. 74 Disease affecting daily performance

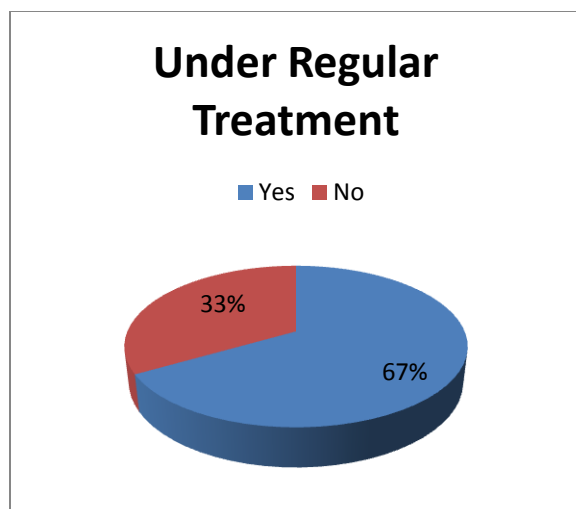


Figure No. 75 Under regular treatment

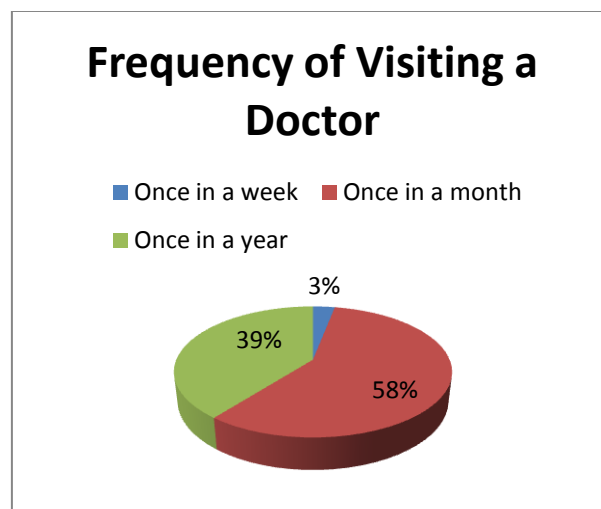


Figure No. 76 Frequency of visiting a doctor

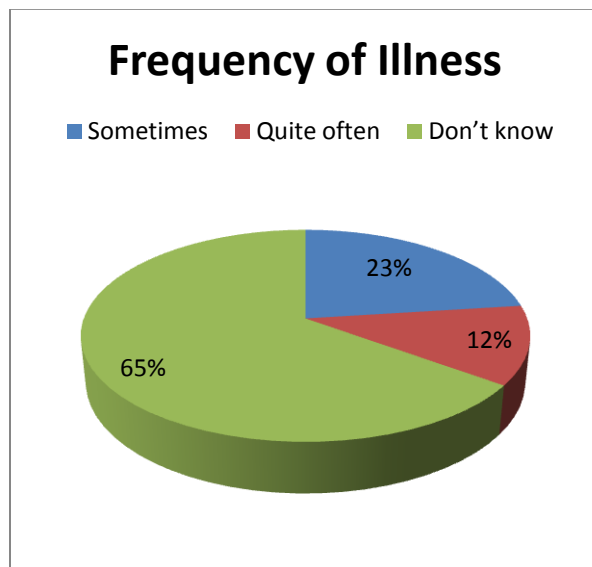


Figure No. 77 Frequency of illness

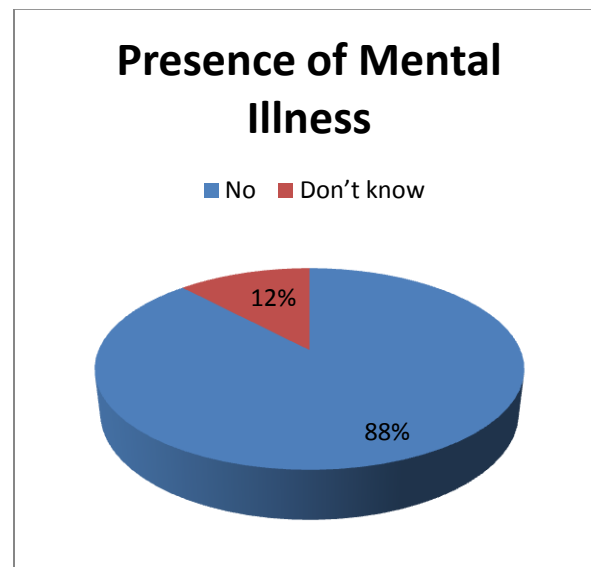


Figure No. 78 Presence of mental illness

Presence of Lifestyle Diseases-When it was asked that do they suffer from any kind of known lifestyle diseases or not, around 30% of the sample population have been suffering from hypertension. On the other hand around 18% of the sample population had Diabetes. Around 14% of the sample population had Asthma followed by 4% of Heart diseases. Furthermore, it was also found out that around 34% of the sample population had complete absence of diseases. According to the report published by the Public Health Foundation of India during the year 2012, about 44 lakh Indians in the age group of 21-79 were not even acquainted with the fact that they

are obese. Diabetes is a very serious disease that exposes people to nerve damage, heart stroke, damage of kidney, blindness, etc. According to the WHO report, Asthma has emerged as a public health concern not only for developed countries but also in developing countries. India has an estimated 15-20 million cases of Asthma. Asthma in many cases may be avoidable, but it generally affects the younger population and it occurs in epidemic. Asthma is caused mainly due to exposure to indoor allergens, exposure to tobacco, smoke and chemical irritants, smoking etc. Also taking of certain drugs can also be the probable cause of asthma. When it was asked that when did they first diagnose about the disease, the respondent explained that they have been experiencing lifestyle diseases since long time and around 42% of the sample population responded that the diseases was diagnosed 5 years back and 24% of the sample population responded that it was diagnosed 10 years back. Lifestyle diseases like hypertension, Diabetes, Asthma, and Heart diseases can affect many aspects of a people's daily activities. Though, with careful planning and proper physical activity, the effects of lifestyle diseases can become much less stressful and obstructive. When it was asked that did they face any problems due to this kind of lifestyle disease, around 48% respondent had faced problems sometimes due to this kind of health problems, around 34% of the sample population had never faced any problems followed by 34% respondent had faced problems rarely.

Treatment of Lifestyle Diseases-When it was asked that do they take regular treatment or not, around 44% of the sample population takes regular treatment or care and 22% of the sample population don't take medical treatment in a daily basis and they agree that practicing movement—physical exercise, taking proper diet and avoiding alcohol consumption and smoking—improves health and decreases the risk of severity of the disease. When it was asked that how frequently do they visit doctor, around 58% respondent see the doctor once in a month, 39% respondent try to set appointments once in a year and only 3% respondent visits the doctor once in a week because they have been suffering from asthma.

Frequency of falling ill-When it was asked that how often do they fall ill, around 65% respondent doesn't have any idea about how often do they get sick and around 23% responded that they sometimes suffer from fever, common cold and 12% responded that they fall ill quite often.

Mental Health-When it was asked that do they suffer from any kind of mental problem or not, around 88% are unaware of their mental health condition and 12% responded that they are not suffering from any kind of mental health problem.

4.9 General Health

The general health screening instrument finds out psychological distress among adults in prime care settings. It was found that respondents are happy to some extent with their life.

Table No. 11 General Health of City Dwellers
Over the past few weeks are you:

Able to concentrate	Not at all(5)	To some extent(78)	More often(7)	Always(10)
Loss of sleep over worry	Not at all(6)	To some extent(53)	More often(14)	Always(27)
Playing a useful Part	Not at all(1)	To some extent(47)	More often(26)	Always(26)
Capable of making decisions	Not at all(1)	To some extent(26)	More often(39)	Always(34)
Felt constantly Under strain	Not at all(25)	To some extent(49)	More often(22)	Always(4)
Could not overcome difficulties	Not at all(36)	To some extent(45)	More often(18)	Always(1)
Able to enjoy life	Not at all(2)	To some extent(42)	More often(30)	Always(26)
Able to face problems	Not at all(10)	To some extent(47)	More often(22)	Always(21)
Feeling unhappy/depressed	Not at all(44)	To some extent(41)	More often(11)	Always(4)
Losing confidence	Not at all(41)	To some extent(29)	More often(24)	Always(6)
Thinking of self as worthless	Not at all(63)	To some extent(12)	More often(20)	Always(5)
Feeling reasonably happy	Not at all(0)	To some extent(48)	More often(27)	Always(25)

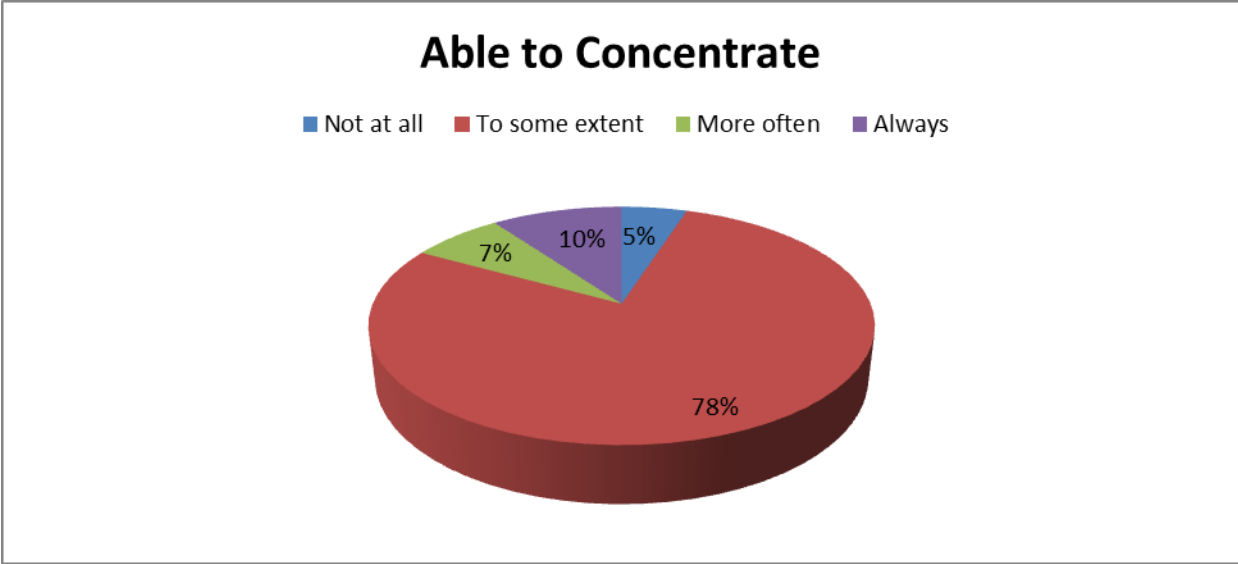


Figure No. 79 Able to concentrate



Figure No. 80 Lost sleep over worry

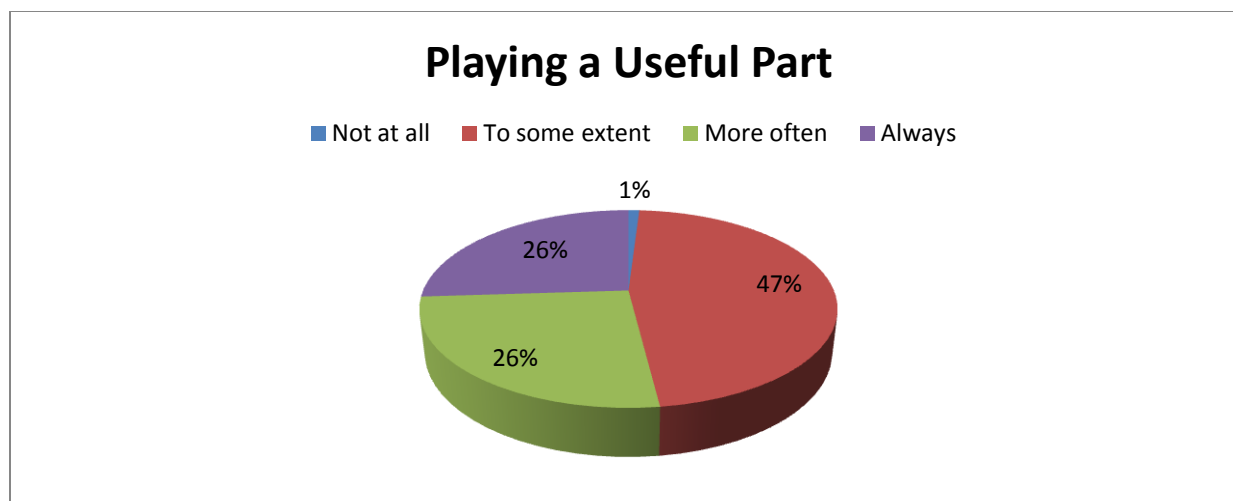


Figure No. 81 Playing a useful part

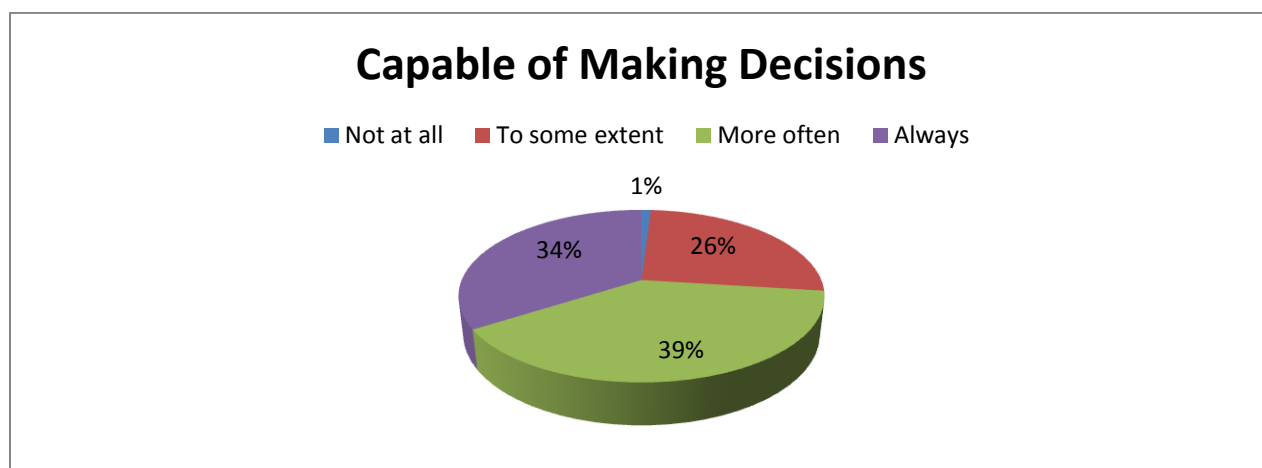


Figure No. 82 Capable of making decisions

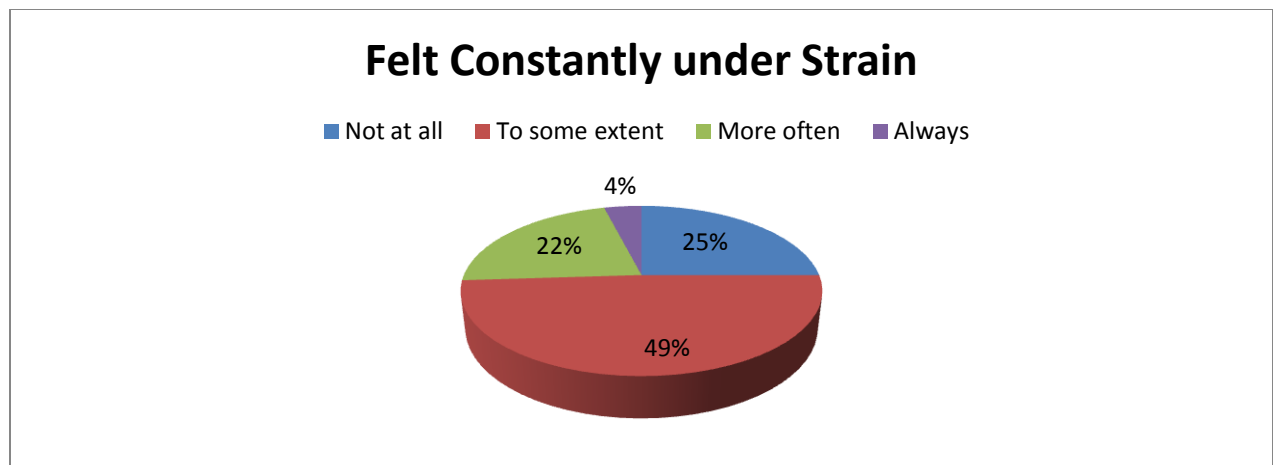


Figure No. 83 Felt constantly under strain

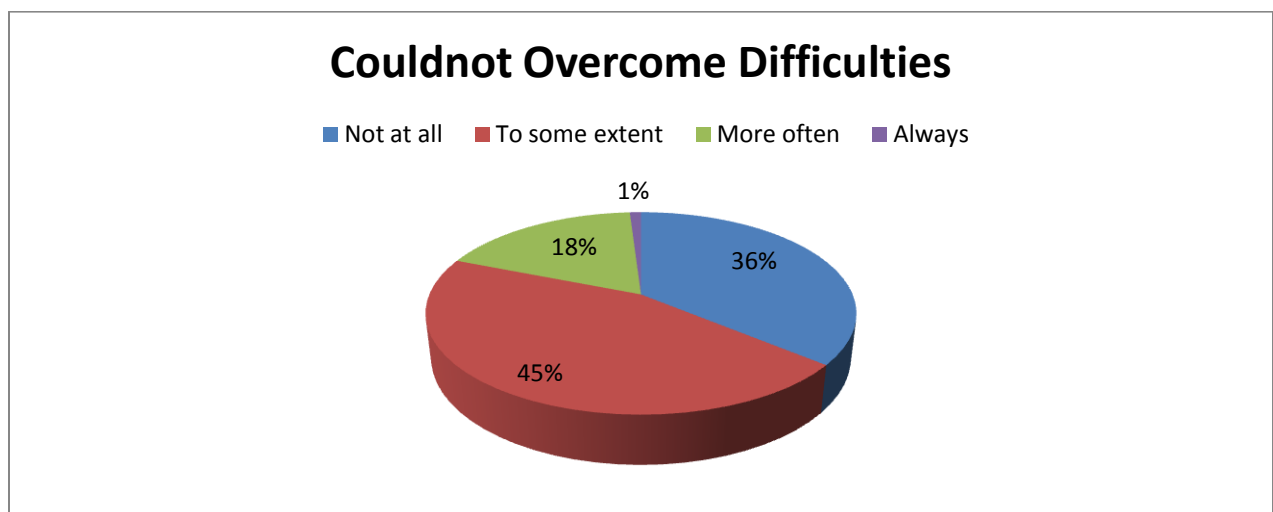


Figure No. 84 Could not overcome difficulties

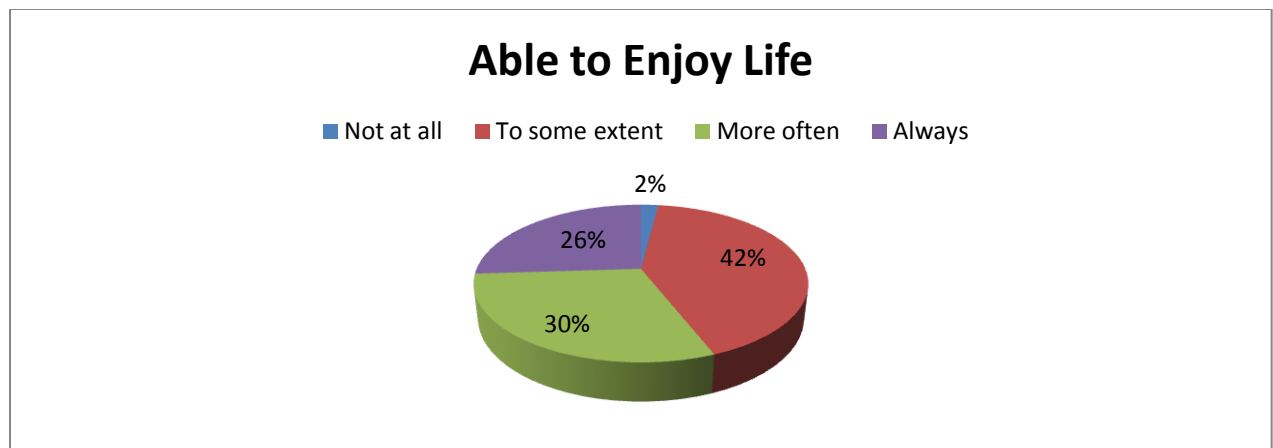


Figure No. 85 Able to enjoy life

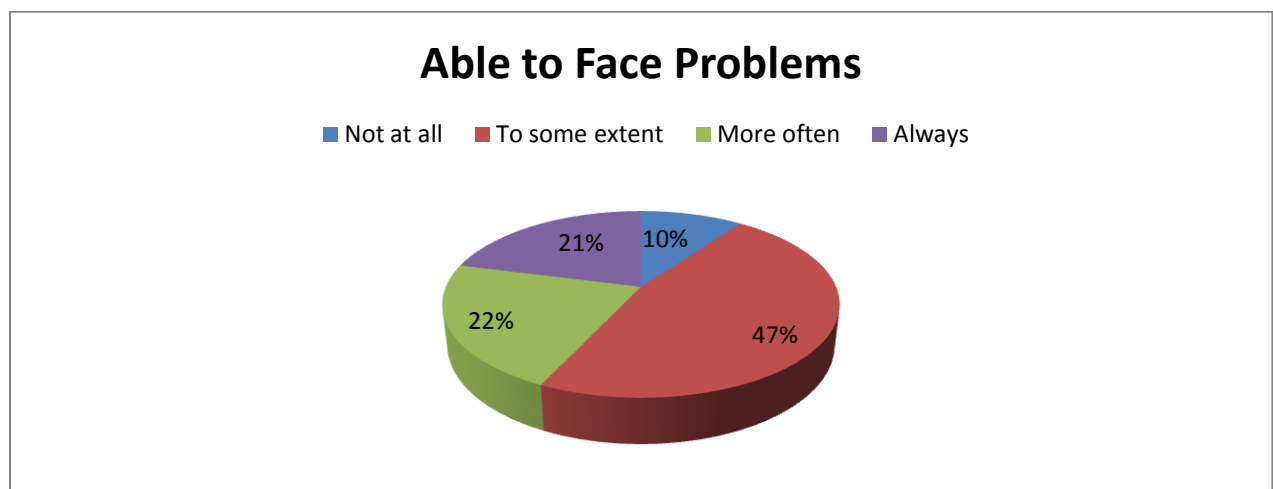


Figure No. 86 Able to face problems

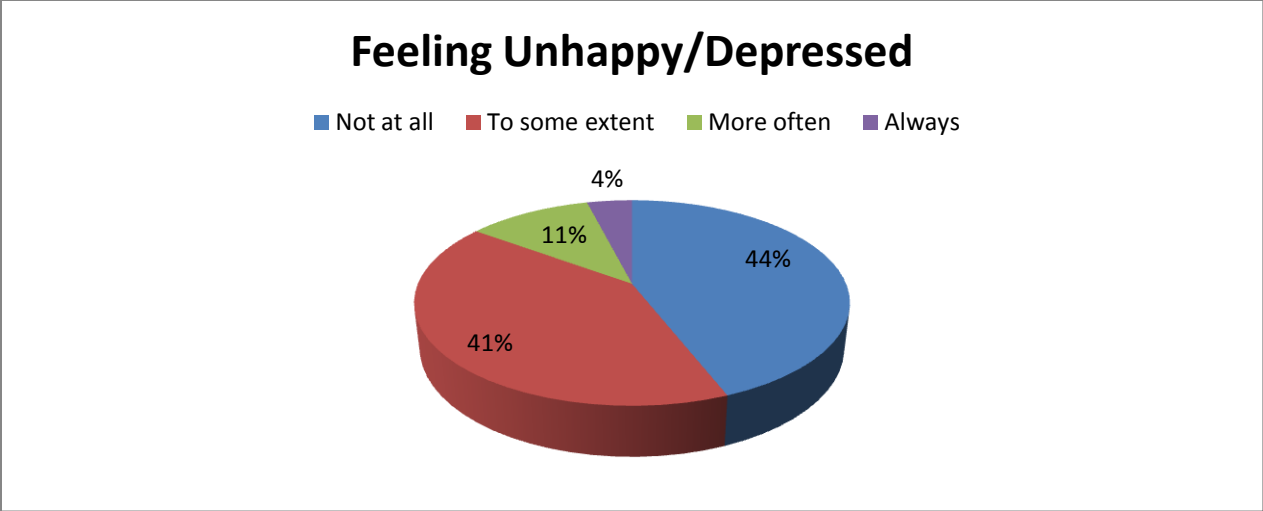


Figure No. 87 Feeling unhappy/depressed

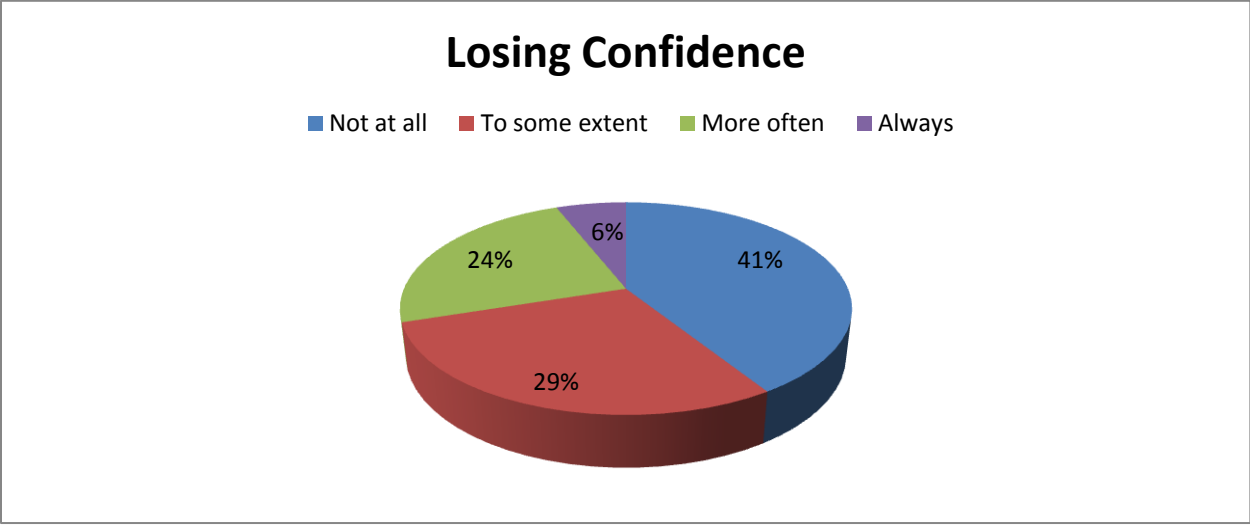


Figure No. 88 Losing confidence

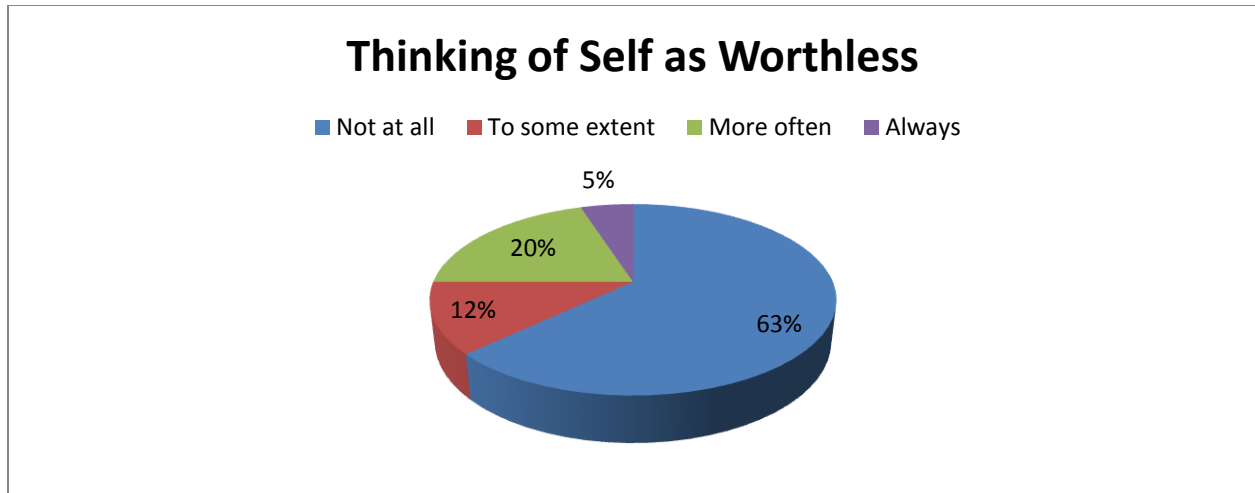


Figure No. 89 Thinking of self as worthless

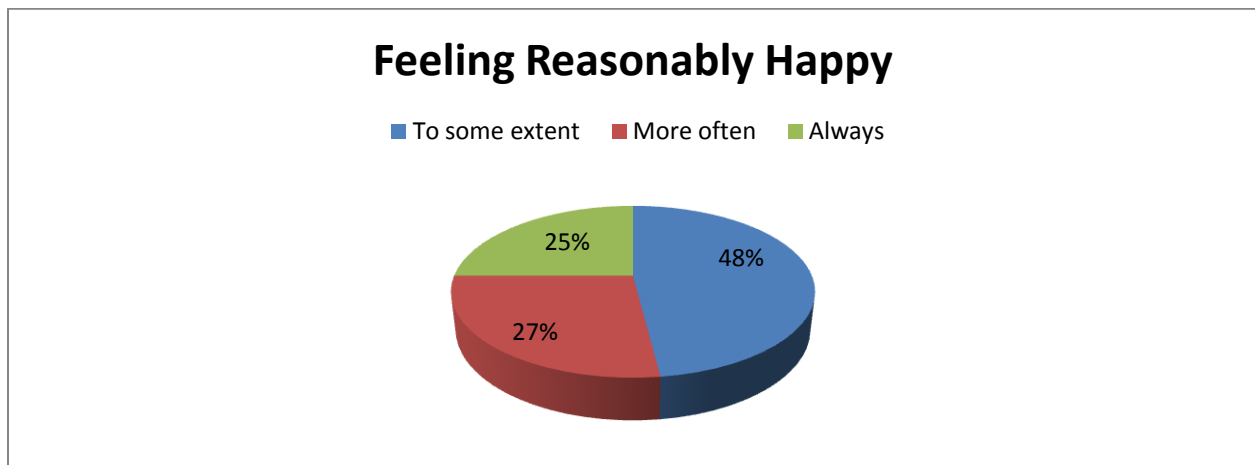


Figure No. 90 Feeling reasonable happy

Concentration-When it was asked that do they able to concentrate or not, around 78% responded that they are able to concentrate to some extent, around 10% said that they can always concentrate while 7% responded more often and 5% responded they are not able to concentrate at all.

Sleep-When it was asked that do they experience sleepiness due to worry or not, around 53% responded to some extent, 27% responded always, 14% responded more often and 6% responded not at all.

Playing a useful part-When it was asked that do they play a useful part or not, around 47% responded to some extent, 26% responded always, 26% responded more often and 1% responded not at all.

Capable of making decision-When it was asked that do they find themselves for capable of making decision, around 39% responded more often, 34% responded always, 26% responded more to some extent and 1% responded not at all.

Felt under strain-When it was asked that did they feel under strain, around 49% responded to some extent, 22% responded more often, 25% responded not at all and 4% responded always.

Overcome difficulties-When it was asked that did they overcome difficulties, around 45% responded to some extent, 36% responded not at all, 18% responded more often and 1% responded always.

Able to enjoy daily life activities-When it was asked that do they able to enjoy day to day activities, around 42% responded to some extent, 30% responded more often, 26% responded always and 2% not at all.

Able to face problems-When it was asked that do they able to face problems, around 47% responded to some extent, around 22% responded more often, 21% responded always and 10% responded not at all.

Feeling unhappy/depressed-When it was asked that do they feel unhappy/depressed around 44% responded not at all, 41% responded to some extent, around 11% responded more often and 4% responded always.

Losing confidence-When it was asked that do they lose confidence, around 41% responded not at all, 29% responded to some extent, 24% responded more often and 6% responded always.

Feeling worthless-When it was asked that do they find themselves worthless, around 63% responded not at all, 20% responded more often, 12% responded to some extent and 5% responded always.

Feeling reasonably happy-When it was asked do they feel reasonably happy, around 48% responded to some extent, 27% responded more often and 25% responded always.

CHAPTER 5

DISCUSSION AND CONCLUSION

In conclusion, our findings showed a high rate of various life-style diseases and their risk factors like more consumption of poor diet, high salt intake, high sugar intake, tobacco smoking and physical inactivity. The presence of such a high prevalence of lifestyle diseases is a cause of worry and need urgent steps in order to avoid and control the risk of future morbidity burden of lifestyle diseases. Most of these risk factors are preventable and can be improved by encouraging the patients to adopt a healthy lifestyle like reducing consumption daily salt and fat intake, avoid smoking and involving in more physical Exercises. So play grounds, safe walking roads and relaxation places should be made in order to encouraging adults to participate more in physical activities and sports related activities.

In the present study, which was conducted in Rourkela, it was found out that number of lifestyle factors are directly responsible for the ill health of the sample population. There are number of lifestyle diseases that are prevalent in the city of Rourkela, such as Blood Pressure, Diabetes, Asthma and stress. It was also found out from the responses that number of factors play an important role for shaping different types of lifestyle diseases.

It was found out that 30% of the sample population has been suffering from hypertension. On the other hand around 18% of the sample population had Diabetes. Around 14% of the sample population had Asthma followed by 4% of Heart diseases. Furthermore, it was also found out that around 34% of the sample population had complete absence of diseases. Sample population had hypertension and they reported that various factors such as age, intake of more salt, lack of physical activity and stress are responsible for the occurrence of blood pressure. Most of them attributed to all the factors for determining blood pressure.

It was also found out that diabetes is also a major lifestyle disease which 18% of the sample population has, after high blood pressure. Most of the respondents attributed to high sugar intake as the primary cause of diabetes, followed by increasing age, lack of exercise and unhealthy diet. Around 14% of the sample population had Asthma as per the responses received. Around 4% of the sample population reported of having heart diseases. Factors mainly improper structuring of work hours, lack of sleep and household factors are responsible for stress as per the responses.

In order to fight lifestyle diseases improper eating habits should be changed followed by balanced diet and proper physical exercise. Sedentary lifestyle should be avoided. Smoking, drinking of alcohol should be avoided. Lifestyle choices should be based on rational choices (Factor, R., Kawachi, I., & Williams, D. R.2011). For overall wellbeing, it is necessary to maintain good lifestyle choices.

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